PROLOG

Obstetrics

SEVENTH EDITION

WQ
18.2
P964
2013
Assessment
Book

The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

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The American College of Obstetricians and Gynecologists
409 12th Street, SW
PO Box 96920
Washington, DC 20090-6920

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Contributors

PROLOG Editorial and Advisory Committee

CHAIR

Ronald T. Burkman Jr, MD
Professor of Obstetrics and Gynecology
Tufts University School of Medicine
Division of General Obstetrics and Gynecology
Department of Obstetrics and Gynecology
Baystate Medical Center
Springfield, Massachusetts

MEMBERS

Bernard Gonik, MD
Professor and Fann Srere Chair of Perinatal Medicine
Division of Maternal–Fetal Medicine
Department of Obstetrics and Gynecology
Wayne State University School of Medicine
Detroit, Michigan

Louis Weinstein, MD
Past Paul A. and Eloise B. Bowers Professor and Chair
Department of Obstetrics and Gynecology
Thomas Jefferson University
Philadelphia, Pennsylvania

Linda Van Le, MD
Leonard Palumbo Distinguished Professor
UNC Gynecologic Oncology
University of North Carolina School of Medicine
Chapel Hill, North Carolina

PROLOG Task Force for *Obstetrics*, Seventh Edition

COCHAIRS

Vincenzo Berghella, MD
Director, Division of Maternal–Fetal Medicine
Professor, Department of Obstetrics and Gynecology
Thomas Jefferson University
Philadelphia, Pennsylvania

George A. Macones, MD
Mitchell and Elaine Yanow Professor and Chair
Department of Obstetrics and Gynecology
Washington University in St. Louis
St. Louis, Missouri

MEMBERS

Cynthia Chazotte, MD
Professor of Clinical Obstetrics and Gynecology and Women's Health
Department of Obstetrics and Gynecology
Weiler Hospital of the Albert Einstein College of Medicine
Bronx, New York

Donna D. Johnson, MD
Professor and Chair
Department of Obstetrics and Gynecology
The Medical University of South Carolina
Charleston, South Carolina

Elizabeth G. Livingston, MD
Division of Maternal–Fetal Medicine
Department of Obstetrics and Gynecology
Duke University Medical Center
Durham, North Carolina

Continued on next page

PROLOG Task Force for *Obstetrics*, Seventh Edition
(continued)

Deborah S. Lyon, MD
Department of Obstetrics and Gynecology
Memorial Hospital
Jacksonville, Florida

Keith H. Nelson, MD
Associate Professor, Interim Division Director
Assistant Program Director
Department of Obstetrics and Gynecology
East Carolina University Brody School of Medicine
Greenville, North Carolina

Christian M. Pettker, MD
Medical Director, Labor and Birth Unit
Assistant Professor, Section of Maternal–Fetal Medicine
Department of Obstetrics, Gynecology, and Reproductive Sciences
Yale University School of Medicine
New Haven, Connecticut

Lauren A. Plante, MD, MPH
Associate Professor
Departments of Obstetrics and Gynecology and Anesthesiology
Director, Division of Maternal–Fetal Medicine
Drexel University College of Medicine
Philadelphia, Pennsylvania

Michael P. Plevyak, MD
Assistant Professor of Obstetrics and Gynecology
Division of Maternal–Fetal Medicine
Associate Program Director, Obstetrics–Gynecology Residency
Tufts University School of Medicine
Baystate Maternal–Fetal Medicine
Springfield, Massachusetts

John M. Thorp Jr, MD
Hugh A. McAllister Distinguished Professor
Department of Obstetrics and Gynecology
University of North Carolina
Chapel Hill, North Carolina

Note: Sean C. Blackwell, MD, also contributed to this unit.

COLLEGE STAFF

Sterling B. Williams, MS, MD, PhD
Vice President for Education

Erica Bukevicz, MS, MBA
Senior Manager, Educational Development and Testing
Division of Education

Christopher T. George, MA
Editor, PROLOG

CONFLICT OF INTEREST DISCLOSURE

This PROLOG unit was developed under the direction of the PROLOG Advisory Committee and the Task Force for *Obstetrics*, Seventh Edition. PROLOG is planned and produced in accordance with the Standards for Enduring Materials of the Accreditation Council for Continuing Medical Education. Any discussion of unapproved use of products is clearly cited in the appropriate critique.

Current guidelines state that continuing medical education (CME) providers must ensure that CME activities are free from the control of any commercial interest. The task force and advisory committee members declare that neither they nor any business associate nor any member of their immediate families has material interest, financial interest, or other relationships with any company manufacturing commercial products relative to the topics included in this publication or with any provider of commercial services discussed in the unit except for **Bernard Gonik, MD**, who serves on advisory boards for Novartis, GSK, and Sanofi-Pasteur Vaccines, and serves as a speaker for Merck, GSK, and Sanofi-Pasteur; **Keith H. Nelson, MD**, who is a physician trainer for Implanon by Merck Pharmaceuticals; and **Linda Van Le, MD**, who serves on the speakers bureaus for Merck and Eisai and on the Advisory Board of Biologics, Inc. All potential conflicts have been resolved through the American College of Obstetricians and Gynecologist's mechanism for resolving potential and real conflicts of interest.

Preface

PROLOG (Personal Review of Learning in Obstetrics and Gynecology) is a voluntary, strictly confidential, self-evaluation program. PROLOG was developed specifically as a personal study resource for the practicing obstetrician–gynecologist. It is presented as a self-assessment mechanism that, with its accompanying performance information, should assist the physician in designing a personal, self-directed life-long learning program. It may be used as a valuable study tool, reference guide, and a means of attaining up-to-date information in the specialty. The content is carefully selected and presented in multiple-choice questions that are clinically oriented. The questions are designed to stimulate and challenge physicians in areas of medical care that they confront in their practices or when they work as consultant obstetrician–gynecologists.

PROLOG also provides the American College of Obstetricians and Gynecologists (the College) with one mechanism to identify the educational needs of the Fellows. Individual scores are reported only to the participant; however, cumulative performance data and evaluation comments obtained for each PROLOG unit help determine the direction for future educational programs offered by the College.

Process

The PROLOG series offers the most current information available in five areas of the specialty: obstetrics, gynecology and surgery, reproductive endocrinology and infertility, gynecologic oncology and critical care, and patient management in the office. A new PROLOG unit is produced annually, addressing one of those subject areas. *Obstetrics*, Seventh Edition, is the first unit in the seventh 5-year PROLOG series.

Each unit of PROLOG represents the efforts of a special task force of subject experts under the supervision of an advisory committee. PROLOG sets forth current information as viewed by recognized authorities in the field of women's health. This educational resource does not define a standard of care, nor is it intended to dictate an exclusive course of management. It presents recognized methods and techniques of clinical practice for consideration by obstetrician–gynecologists to incorporate in their practices. Variations of practice that take into account the needs of the individual patient, resources, and the limitations that are special to the institution or type of practice may be appropriate.

Each unit of PROLOG is presented as a two-part set, with performance information and cognate credit available to those who choose to submit their answer sheets for confidential scoring. The first part of the PROLOG set is the Assessment Book, which contains educational objectives for the unit and multiple-choice questions, and an answer sheet with return mailing envelope. Participants can work through the book at their own pace, choosing to use PROLOG as a closed- or open-book assessment. Return of the answer sheet for scoring is encouraged but voluntary.

The second part of PROLOG is the Critique Book, which reviews the educational objectives and items set forth in the Assessment Book and contains a discussion, or critique, of each item. The critique provides the rationale for correct and incorrect options. Current, accessible references are listed for each item.

Continuing Medical Education Credit

ACCME Accreditation

The American College of Obstetricians and Gynecologists is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA PRA Category 1 Credit(s)™

The American College of Obstetricians and Gynecologists designates this enduring material for a maximum of 25 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

College Cognate Credit(s)

The American College of Obstetricians and Gynecologists designates this enduring material for a maximum of 25 Category 1 College Cognate Credits. The College has a reciprocity agreement with the American Medical Association that allows *AMA PRA Category 1 Credits*™ to be equivalent to College Cognate Credits.

Fellows who submit their answer sheets for scoring will be credited with 25 hours. Participants who return their answer sheets for CME credit will receive a Performance Report that provides a comparison of their scores with the scores of a sample group of physicians who have taken the unit as an examination. An individual may request credit only once for each unit. *Please allow 4–6 weeks to process answer sheets.*

Credit for PROLOG *Obstetrics*, Seventh Edition, is initially available through December 2015. During that year, the unit will be re-evaluated. If the content remains current, credit is extended for an additional 3 years, with credit for the unit automatically withdrawn after December 2018.

Conclusion

PROLOG was developed specifically as a personal study resource for the practicing obstetrician–gynecologist. It is presented as a self-assessment mechanism that, with its accompanying performance information, should assist the physician in designing a personal, self-directed learning program. The many quality resources developed by the College, as detailed each year in the College's *Publications and Educational Materials Catalog* are available to help fulfill the educational interests and needs that have been identified. PROLOG is not intended as a substitute for the certification or recertification programs of the American Board of Obstetrics and Gynecology.

PROLOG CME SCHEDULE

Gynecology and Surgery, Sixth Edition (2009)	Credit through 2014
Reproductive Endocrinology and Infertility, Sixth Edition (2010)	Credit through 2015
Gynecologic Oncology and Critical Care, Sixth Edition (2011)	Re-evaluated in 2013– Credit through 2016
Patient Management in the Office, Sixth Edition (2012)	Re-evaluated in 2014– Credit through 2017
Obstetrics, Seventh Edition (2013)	Re-evaluated in 2015– Credit through 2018

PROLOG Objectives

PROLOG is a voluntary, strictly confidential, personal continuing education resource that is designed to be both stimulating and enjoyable. By participating in PROLOG, obstetrician–gynecologists will be able to do the following:

- Review and update clinical knowledge.
- Recognize areas of knowledge and practice in which they excel, be stimulated to explore other areas of the specialty, and identify areas requiring further study.
- Plan continuing education activities in light of identified strengths and deficiencies.
- Compare and relate present knowledge and skills with those of other participants.
- Obtain continuing medical education credit, if desired.
- Have complete personal control of the setting and of the pace of the experience.

The obstetrician–gynecologist who completes *Obstetrics*, Seventh Edition, will be able to:

- Demonstrate an understanding of maternal and fetal physiology and pathophysiology and the effect on normal and complicated pregnancies.
- Identify components of antepartum care that optimize maternal and perinatal outcomes in uncomplicated pregnancies, including education regarding normal pregnancy.
- Diagnose and plan efficacious and cost-effective management of medical and obstetric conditions encountered during the antepartum period.
- Identify the risks and prognosis of selected complications of pregnancy and in the neonate.
- Describe invasive and noninvasive methods of fetal assessment in the antepartum period and identify the risks, indications, predictive value, and the physiologic basis for the tests.
- Diagnose problems and manage obstetric emergencies.
- Select appropriate management strategies for intrapartum care and delivery.
- Consider medical–legal principles, risk management and office management guidelines in obstetric practice.

Obstetrics, Seventh Edition, includes the following topics:

SCREENING AND DIAGNOSIS
Acute fatty liver of pregnancy
Amniotic fluid embolus
Anemia workup
Aneuploidy screening
Appendicitis in pregnancy
Cerebral palsy
Cervical insufficiency
Chorioamnionitis
Complications of anesthesia
Complications of gastric bypass surgery in the obese parturient
Diagnosis of fetal cytomegalovirus
Diagnosis of parvovirus
Disseminated intravascular coagulopathy
Electronic fetal heart rate monitoring
Fetal acid–base assessment
Fetal hyperthyroidism
Genetic screening in women of Ashkenazi Jewish descent
Gestational diabetes mellitus
Headache
Hemoglobinopathy
Hepatitis B

Hepatitis C screening in pregnancy
Hydramnios evaluation
Imitators of severe preeclampsia
Intimate partner violence
Intrahepatic cholestasis of pregnancy
Intrapartum electronic fetal monitoring nomenclature
Macrosomia
Maternal and fetal adverse effects of antihypertensives
Maternal complications of sickle cell anemia
Maternal hypothyroidism
Monochorionic twins
Motor vehicle collision
Oligohydramnios
Placental abruption
Placenta previa at 20 weeks of gestation
Positive antibody screen
Pyelonephritis
Screening for depression in pregnancy
Screening testing strategies for fetal lung maturity
Serum markers and adverse pregnancy outcome
Thrombocytopenia
Tuberculosis
Twin–twin transfusion syndrome
Ultrasonographic markers of Down syndrome
Ultrasonography to date pregnancy
Vaginal birth after cesarean delivery
Vanity or keepsake ultrasonography

MEDICAL MANAGEMENT

Anemia
Antiphospholipid syndrome
Asthma medications
Breast mass in pregnancy
Cerebral palsy
Cervical length
Cholestasis and fetal risks
Chorioamnionitis
Community-acquired pneumonia
Contraindications to tocolysis
Decreased fetal movement
Fetal death
Genital herpes in patient with preterm premature rupture of membranes
Group B streptococci and penicillin allergy
Hemolysis, elevated liver enzymes, and low platelet count syndrome
Human immunodeficiency virus
Hypertension in pregnancy
Immunization in pregnancy
Induction of labor
Inherited thrombophilia
Intrahepatic cholestasis of pregnancy
Intrauterine growth restriction
Labor dystocia
Latent phase of labor
Management of thrombophilia
Mastitis
Migraine
Mitral valve prolapse and subacute bacterial endocarditis
Nausea and vomiting in pregnancy
Patient in labor with human immunodeficiency virus
Periodontal disease in pregnancy
Peripartum anticoagulation
Peripartum cardiomyopathy
Postpartum fever
Preterm premature rupture of membranes
Prevention of recurrent preterm delivery
Pulmonary embolism
Recurrent spontaneous abortion
Seizure disorder medications
Severe rhesus disease in pregnancy
Shoulder dystocia
Statins and drug exposure during pregnancy
Steroid use in pregnancy
Suppressive therapy for genital herpes
Syphilis
Thrombocytopenia
Toxoplasmosis and pregnancy
Treatment of gestational diabetes mellitus
Tubal sterilization
Use of biophysical profile in pregnancy management
Use of vibroacoustic stimulation in pregnancy
Uterine inversion
Vulvar hematoma

PHYSIOLOGY

Air travel
Cardiovascular physiology
Diabetes mellitus

SURGICAL MANAGEMENT

External cephalic version
Operative complications in the obese patient
Postpartum hemorrhage
Timing of antibiotic administration for cesarean delivery

EPIDEMIOLOGY AND BIOSTATISTICS

Alcohol use in pregnancy
Autoimmune disorders and pregnancy
Cocaine use in pregnancy
Congenital cytomegalovirus in pregnancy
Congenital malformations due to methotrexate exposure
Epidural complications
Gestational diabetes mellitus recurrence
Maternal and fetal adverse effects of tocolysis
Maternal human immunodeficiency virus
Perinatal survival
Preterm birth

COUNSELING

Contraindication to trial of labor after cesarean delivery
Cystic fibrosis
Fetal death
Fish intake in pregnancy
Influenza vaccination
Management of triplets
Multiple sclerosis
Operative vaginal delivery
Peripartum cardiomyopathy
Prevention of listeriosis in pregnancy
Smoking cessation

ETHICAL AND LEGAL ISSUES

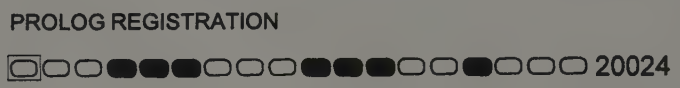
Elective cesarean delivery
Hospital standards for neonatal resuscitation
Legal and ethical obligations in patient transfer
Periviable birth
Postpartum contraception in new Centers for Disease Control and Prevention recommendations
Steroid use in pregnancy
Supplemental folic acid in the periconception period
Use of peak flow meter in asthma

A complete subject matter index appears at the end of the Critique Book.

Instructions

This book contains several types of questions. You will find special directions for each question type inside the book. Be sure that you understand the directions before answering any questions.

If you choose to participate in PROLOG for continuing medical education credit, your answers should be recorded on the separate answer sheet enclosed. Directions for recording your answers are included on the answer sheet. The registration code is printed on your answer sheet and is already encoded into the computer-readable grid. You do not need to fill out a registration code grid to identify your paper. The example below identifies PROLOG user #E20024.



To ensure that your results are returned promptly, please complete your name and address on the answer sheet. We suggest that you keep a personal record of both your registration code and your answers so that you may check the individualized performance report that is returned to you.

The completed answer sheet should be submitted for scoring in the postage-paid return envelope enclosed with this package. Please allow 1 month for score sheets to be processed. If you do not wish to submit your answers for scoring, you will not receive credit. The Critique Book enclosed in this package will, however, enable you to score your own test.

DIRECTIONS: Each of the questions or incomplete statements below is followed by suggested answers or completions. Select the ONE that is BEST in each case, and fill in the circle containing the corresponding letter on the answer sheet.

1

An 18-year-old woman, gravida 1, para 0, at 41 weeks of gestation has had rupture of membranes for approximately 17 hours. She is in early labor with contractions every 5 minutes with cervical dilation at 5–6 cm. She received an epidural for pain relief 12 hours ago. Her temperature is 38.5° C (101°F). Her pulse is 124 beats per minute (bpm) and the fetal heart rate is 175 bpm with accelerations. She does not have any shortness of breath, dyspnea, or headaches. Her physical examination is notable for fundal tenderness. On admission, her white blood cell count was 18,000 cells/mm^3 and her urinalysis had negative leukocyte esterase and nitrites. The most likely cause of her fever is

(A) pyelonephritis
(B) chorioamnionitis
(C) pneumonia
(D) epidural fever
(E) meningitis

2

A 25-year-old woman, gravida 1, at 10 weeks of gestation comes to your office for prenatal care. Her rapid plasma reagin (RPR), non-specific treponemal antibody test was reactive with a titer of 1:16. She also had a positive treponemal specific test result. Other prenatal laboratory results were unremarkable. The patient has mild nausea but no other medical problems. She has a normal physical examination. She has a history of anaphylaxis with penicillin administration for streptococcal pharyngitis ("strep throat") 5 years ago, but she can tolerate cephalexin. The best treatment option is

(A) tetracycline
(B) azithromycin
(C) penicillin G desensitization
(D) ceftriaxone

Note: See Appendix A for a table of normal values for laboratory tests.

3

A 28-year-old woman, gravida 2, para 1, comes to the office for a routine prenatal visit at 38 weeks of gestation. She started her pregnancy at a normal weight for her height and has gained 8.2 kg (18 lb) to date. Her first child was delivered vaginally at 39 weeks of gestation and weighed 3,750 g. Her 1-hour glucose tolerance test is normal. Her blood pressure is 110/70 mm Hg with a normal urinalysis. On physical examination, the fundal height is 39 cm and Leopold maneuvers suggest an infant in cephalic presentation that weights approximately 3,860 g (8.5 lb). The fetal heart rate is 130 beats per minute. Her cervix is closed, long, and firm. Ultrasonography shows a singleton pregnancy in cephalic presentation with an estimated fetal weight of 4,110 g (9 lb). The best next step in management is

(A) cesarean delivery at 39 weeks
(B) expectant management
(C) immediate cesarean delivery
(D) immediate induction of labor
(E) induction of labor at 39 weeks

4

A 32-year-old woman is preparing for infertility treatment. You counsel her that she can reduce her risk of having a fetus with a neural tube defect (NTD) by taking a supplement that contains the micronutrient

(A) thiamine
(B) folic acid
(C) pyridoxine
(D) beta carotene

5

A 24-year-old woman, gravida 4, para 0, at 29 weeks of gestation presents in preterm labor. Her cervix is 3 cm dilated and 80% effaced. Intact membranes are noted on speculum examination. The fetal heart rate tracing is Category I. You observe no evidence of chorioamnionitis. She was admitted 3 weeks ago for preterm labor and received a course of antenatal steroids. When she asks about further use of antenatal steroids, you tell her that the optimal number of additional courses of steroids is

(A) 1
(B) 2
(C) 3
(D) 4

6

A 22-year-old primigravid woman at 31 weeks of gestation was admitted 5 days ago for preterm premature rupture of membranes. She is receiving antibiotics for latency and has completed a course of steroids. Her past medical history is negative. She smokes a half pack of cigarettes daily, but has been switched to a nicotine patch during the hospital stay. She now reports vaginal bleeding. When questioned, she reports that the baby is "balling up." Her heart rate is 110 beats per minute, blood pressure 130/80 mm Hg, and temperature 37.2°C (99.0°F). Fetal heart rate is 160 beats per minute with minimal variability. On abdominal examination, her uterus is continuously firm to palpation. Given this clinical scenario, the most likely diagnosis is

(A) placenta previa
(B) preterm labor
(C) placental abruption
(D) chlamydial cervicitis

7

A 21-year-old primiparous woman at term has had an uncomplicated labor. She achieved complete dilation 3 hours ago. She has been pushing with contractions since then and the fetal head has descended to 3 cm below the maternal ischial spines with some caput. The presenting position is left occiput anterior. The fetal heart rate tracing is Category I. Estimated fetal weight is 3,800 g. Her epidural analgesia is functioning well. The patient reports that she is completely exhausted and requests an operative vaginal delivery. In counseling this patient for operative vaginal delivery by vacuum, you should inform her that the most serious complication related to use of this procedure is

(A) subgaleal hemorrhage
(B) cephalohematoma
(C) facial palsy
(D) skull fracture

8

A patient comes to your office at 28 weeks of gestation for her 1-hour glucose tolerance test. A complete blood count is done at the same time. Her platelet count is 95,000/mm^3. A repeat platelet count 6 weeks later is 92,000/mm^3. She currently feels well with no recent illnesses. She is healthy and takes only a prenatal vitamin. Her initial prenatal laboratory results show a platelet count of 287,000/mm^3. She has normal blood pressure and her urine dipstick test result is negative for protein. The most likely diagnosis is

(A) preeclampsia
(B) gestational thrombocytopenia
(C) idiopathic thrombocytopenia purpura
(D) drug-induced thrombocytopenia
(E) thrombocytopenia due to a viral illness

9

A 30-year-old primigravid woman comes to your office for her first prenatal visit at 12 weeks of gestation. She has mild hypertension that has been treated with pharmacotherapy for the past year. She reports first-trimester exposure to an angiotensin converting enzyme (ACE) inhibitor. Her renal function is normal and she had a negative screen result for diabetes mellitus in the past year. The most appropriate next step to identify fetal abnormalities associated with ACE inhibitor therapy is

(A) karyotype
(B) nuchal translucency
(C) second-trimester serum screening
(D) targeted ultrasonography

10

A 19-year-old woman, gravida 1, is in spontaneous labor at 41 weeks of gestation. Initially, her cervix was 2 cm, 90% effaced, and the fetus was at –1 station. Clinical examination reveals an adequate maternal pelvis and an estimated fetal weight of 3,700 g. She receives oxytocin for labor augmentation. Her cervical examination progressed to 4 cm, 100% effacement, and 0 station, but has not changed for 2 hours and 20 minutes. The fetal heart rate tracing is Category I. An intrauterine pressure catheter is in place and she is contracting adequately on 20 mU/min of oxytocin. The best next step in management is

(A) cesarean delivery
(B) increase oxytocin
(C) add prostaglandin
(D) continue labor

11

A 35-year-old woman, gravida 1, at 38 weeks of gestation requires a cesarean delivery for an active phase arrest. Her body mass index (calculated as weight in kilograms divided by height in meters squared [kg/m^2]) (BMI) is 45. She undergoes the cesarean delivery through a Pfannenstiel incision. The surgical technique or option that is most likely to prevent wound breakdown is

(A) subcutaneous closure
(B) skin closure with staples
(C) placement of a subcutaneous drain
(D) to avoid electrocautery

12

A patient is seen 16 hours after she underwent a spontaneous vaginal delivery of a 4,138 g (9 lb 2 oz) infant and is noted to have a 6 × 5 cm right vulvar hematoma. She is uncomfortable and voiding is difficult. She is observed for 2 hours and the hematoma does not seem to be expanding. Her hematocrit is 30%, having decreased from a predelivery value of 36%, and her vital signs are stable. Rectovaginal examination reveals no hematoma. The best next step in management is

(A) incision and drainage of vulvar hematoma
(B) interventional radiology for embolization of pudendal vessels
(C) hypogastric artery ligation
(D) observation
(E) blood transfusion

13

A 39-year-old primigravid woman seeks nutritional advice at her first prenatal visit. Her sister had a fetal demise at 36 weeks of gestation that was attributed to infection with *Listeria monocytogenes*. She asks what foods she needs to avoid in order to decrease her risk of infection. You tell her that, in addition to avoiding unpasteurized food products, the type of food that she needs to avoid is

(A) canned tuna
(B) cream cheese
(C) cold delicatessen meat
(D) canned salmon
(E) mozzarella cheese

14

During a prenatal visit, a healthy 38-year-old primigravid woman asks about elective cesarean delivery. For personal reasons, she wants to plan her delivery to occur at 39 weeks of gestation. You review the relevant medical issues but are uncomfortable with agreeing to perform the cesarean delivery in the absence of a medical indication. The best option in this situation is to

(A) decline her request
(B) refer her to another health care provider
(C) agree to perform the cesarean delivery
(D) offer elective induction

15

According to the 2011 Centers for Disease Control and Prevention recommendations, the use of combined oral contraceptives (OCs) can be safely started postpartum without contraindications at

(A) 2 days
(B) 7 days
(C) 14 days
(D) 21 days
(E) 28 days

16

A patient was treated with methotrexate for a suspected ectopic pregnancy. She returns to the clinic 4 weeks later with nausea and vomiting, breast tenderness, and a positive pregnancy test result. Ultrasonography reveals an intrauterine 10-week-sized fetus. As her physician, you inform her that methotrexate exposure during pregnancy is associated with

(A) no major anomalies
(B) congenital renal anomalies
(C) anomalies that are preventable with folic acid supplementation
(D) anomalies that are preventable with leucovorin rescue
(E) limb and cranial anomalies

17

A 31-year-old woman, gravida 3, para 2, comes to your clinic for a routine prenatal visit at 39 weeks of gestation. She enrolled late for prenatal care at 28 weeks of gestation. To date, she has had an uncomplicated pregnancy with normal weight gain, fetal growth, and laboratory testing. On examination, the fetus is in cephalic presentation and her cervix is favorable. She requests labor induction before her husband is deployed next week for military service. Amniocentesis is performed. Analysis of the blood-contaminated amniotic fluid shows a lecithin–sphingomyelin ratio of 1.7 and the presence of phosphatidylglycerol. The best management option for this patient is

(A) amniocentesis in 1 week
(B) corticosteroid therapy
(C) immediate labor induction
(D) labor induction in 1 week
(E) lamellar body count testing

18

A 27-year-old woman, para 0, at 27 weeks of gestation gives birth to a 1,100-g fetus after a rapid labor complicated by heavy uterine bleeding. Her urine toxicology test result is positive. The most likely drug use associated with this clinical scenario is

(A) opiate
(B) cocaine
(C) marijuana
(D) barbiturate
(E) benzodiazepine

19

A 26-year-old woman, gravida 3, is at 14 weeks of gestation. Both of her previous pregnancies resulted in a pregnancy loss in the second trimester. She also developed a pulmonary embolus during the postpartum period. She had positive test results for anti-cardiolipin antibody and lupus anticoagulant. In addition to administration of low-dose aspirin, the most appropriate medical therapy for her during pregnancy and the postpartum period is

(A) heparin
(B) folic acid
(C) steroids
(D) no additional therapy

20

A 36-year-old woman, gravida 4, para 2, at 34 weeks of gestation presents with a 1-week history of severe full body pruritus that is significantly affecting her sleep. The itching involves her palms and soles, but there is no associated rash. Laboratory findings show mildly increased liver function tests and an increased serum bile acid level. The best next step in management is to administer

(A) cholestyramine
(B) dexamethasone
(C) S-adenosyl-L-methionine
(D) ursodeoxycholic acid

21

A patient presents at 24 weeks of gestation in active labor with a cervical dilation of 8 cm and breech presentation. You deem that delivery is imminent and that cesarean delivery would be the best option for the fetus. The fetal factor that is most predictive of the survival of the preterm newborn is

(A) race
(B) gender
(C) birth weight
(D) gestational age

22

Vibroacoustic stimulation is most useful as an adjunct to the antepartum nonstress test when the test is

(A) reactive with variable decelerations
(B) reactive with late decelerations
(C) nonreactive without decelerations
(D) nonreactive with late decelerations

23

A 25-year-old woman, gravida 1, para 1, had an uncomplicated vaginal delivery. At her 6-week postpartum visit, she tells you that she is worried about postpartum depression, which she has read about in a newspaper. She is currently without depressive symptoms and on no medications. In regard to the patient's concern about postpartum depression, the best next step in management is

(A) to screen with the Edinburgh Postnatal Depression Scale
(B) to start prophylactic paroxetine
(C) for the health care provider to initiate a mood assessment
(D) to refer to a psychiatrist
(E) to recommend self-monitoring

24

A 22-year-old woman, gravida 3, para 1, comes to the hospital at 32 3/7 weeks of gestation after leaking a large amount of fluid from the vagina. Her group B streptococcal culture was negative during an admission 3 weeks ago for preterm labor. Her vital signs are within normal limits. Membrane rupture is confirmed by pooling, nitrazine, and ferning, and her cervix appears to be closed on speculum examination. Fetal pulmonary maturity is documented on amniotic fluid testing. Fetal monitoring shows a Category I fetal heart rate tracing and no uterine contractions. Cephalic presentation is confirmed by ultrasonography. The most appropriate next step in management is to

(A) administer antenatal steroids
(B) commence labor induction
(C) initiate antibiotics
(D) deliver at 34 weeks of gestation
(E) prescribe tocolytic medication

25

A 26-year-old multiparous woman presents with cough and fever. She resides in a shelter and has had no prenatal care. She has received no recent antibiotics and reports no chronic illness. Bedside ultrasonography suggests she is at 22 weeks of gestation. Her temperature is 38.9°C (102°F), respiratory rate is 26 breaths per minute, maternal heart rate is 110 beats per minute. Chest X-ray shows a left lower lobe infiltrate. The most appropriate initial treatment is

(A) ciprofloxacin
(B) azithromycin
(C) ampicillin plus gentamicin
(D) oseltamivir
(E) isoniazid

26

A 25-year-old woman, gravida 6, para 5, comes to your office at 6 weeks of gestation for routine prenatal care. The patient's blood type is O-negative and her antibody screen result is positive. The antibody is identified as anti-Duffy (anti-Fy^a antibody). The father of the baby is Duffy antigen-negative. Her hemoglobin and hematocrit counts at 37 weeks of gestation are 9.1 g/dL and 27.8%, respectively, with a platelet count of 278,000/mm^3. On presentation to labor and delivery for an induction at 41 weeks of gestation, given the positive maternal antibody screen, the most appropriate maternal laboratory test or option is

(A) quantitate the antibody
(B) type and screen
(C) type and crossmatch
(D) no further testing is indicated

27

A 25-year-old pregnant woman at 38 weeks of gestation with no previous prenatal care comes to your hospital in active labor with ruptured membranes for 4 hours. She reports a history of recurrent genital herpes, noting that she feels tingling on the left labium. On inspection, a 5-mm shallow ulcer is seen. She is concerned about transmitting her infection to her child, and asks about treatment options. The best next step in management is

(A) vaginal delivery
(B) administer valacyclovir
(C) await culture results of lesion
(D) cesarean delivery

28

A 29-year-old primigravid woman had a Down syndrome risk of 1:50 based on an integrated screen showing pregnancy-associated plasma protein-A (PAPP-A) of 0.3 multiples of the median (MoM), β-hCG of 1.7 MoM, alpha-fetoprotein (AFP) of 0.5 MoM, unconjugated estriol of 0.6 MoM, and inhibin A of 1.8 MoM. Amniocentesis at 17 weeks of gestation revealed a normal 46, XY karyotype. Her fundal height at 37 weeks of gestation was 34 cm and ultrasonography placed the estimated fetal weight below the 10th percentile. Her serum marker result that is most strongly associated with fetal growth restriction is

(A) β-hCG
(B) inhibin A
(C) AFP
(D) PAPP-A
(E) unconjugated estriol

29

A 37-year-old woman, para 7, has just given birth to a vigorous infant. The placenta is delivered after fundal massage and cord traction. Heavy uterine bleeding ensues with a mass present at the introitus consistent with uterine inversion. The best next step in pharmacologic management is to prescribe

(A) oxytocin
(B) methergine
(C) nitroglycerin
(D) human recombinant factor VIIa
(E) 15-methyl prostaglandin $F_{2\alpha}$

30

A 30-year-old woman, gravida 2, para 1, enrolls for prenatal care at 10 weeks of gestation and requests aneuploidy screening. The first-trimester ultrasonographic marker most likely to be clinically useful in screening for Down syndrome is

(A) ductus venosus velocimetry
(B) hepatic artery velocimetry
(C) nasal bone absence
(D) nuchal translucency
(E) tricuspid regurgitation

31

A 36-year-old woman, gravida 5, para 5, has just given birth after a precipitous labor. Thirty minutes later, the nurse reports the uterus is boggy and not responding to fundal massage. Further vigorous massage, rapid infusion of an oxytocin solution, and methylergonovine maleate administration fail to control the bleeding, which is now at approximately 1,500 cc. A second intravenous line has been started with vigorous fluid resuscitation and blood products have been ordered. Inspection of the vaginal vault and cervix reveals no lacerations, but blood is pouring from the os during the examination. Fundal exploration is negative. The placenta is inspected and found to be intact. The patient tells you that she has been experiencing bouts of dizziness. Her vital signs are the following: pulse, 130 bpm; blood pressure, 90/40 mm Hg; temperature, 37.2°C (99°F); and respiratory rate, 28 breaths per minute. In addition to transfusion, the best next step is to initiate

(A) balloon tamponade
(B) uterine artery embolization
(C) additional uterotonics
(D) B-Lynch suture
(E) hysterectomy

32

A 32-year-old woman, gravida 3, para 2, at 22 weeks of gestation has a detailed fetal anatomic screen that reveals that her fetus has isolated bilateral cerebral ventriculomegaly. First-trimester risk assessment demonstrated a Down syndrome risk of 1:5,000 and a trisomy 18 risk of 1:10,000. Second-trimester alpha-fetoprotein (AFP) testing was 1.23 multiples of the median. There is no family history of ventriculomegaly. The toxoplasma serology result is negative, but cytomegalovirus (CMV) serology returns positive immunoglobulin G (IgG) and immunoglobulin M (IgM). The most sensitive and specific test for diagnosing fetal CMV infection is

(A) repeat CMV serology
(B) CMV IgG avidity testing
(C) amniocentesis for CMV DNA polymerase chain reaction
(D) fetal magnetic resonance imaging
(E) cordocentesis for fetal liver function tests

33

A 42-year-old white woman, gravida 1, comes to your office for her first prenatal visit at 12 weeks of gestation. She has no personal or family history of anemia. She is a vegan. Her prenatal laboratory results show a white blood count of 10,200/mm^3, hemoglobin level 8.5 g/dL, hematocrit level 26.5%, and platelet count of 247,000/mm^3. The mean corpuscular volume is 73 fL. Her serum ferritin level is 6 micrograms/L and her iron level is 23 micrograms/L. The best next step in her management is

(A) hemoglobin electrophoresis
(B) vitamin B_{12} supplementation
(C) erythropoietin injections
(D) iron supplementation
(E) folate supplementation

34

You are consulted by a 40-year-old woman with type 2 diabetes mellitus, hypertension, and hyperlipidemia, who has a positive pregnancy test result. Her current medications include metformin, amlodipine, and simvastatin. She is concerned about medication exposure to her fetus. Of the medications that she is taking, you recommend discontinuation of

(A) none
(B) metformin
(C) amlodipine
(D) simvastatin

35

A 36-year-old woman, gravida 2, para 1, returns to your clinic at 24 weeks of gestation for a prenatal care visit. She wants to be sure that she does not have diabetes mellitus during her pregnancy. The most accepted method for screening for gestational diabetes mellitus in the United States is

(A) hemoglobin A_{1C}
(B) fasting blood glucose
(C) 50-g glucose challenge test
(D) urine glucose level

36

A 21-year-old woman, gravida 1, is seen at 37 weeks of gestation with a subjective report of diminished fetal movement over the past 18 hours. Her fundal height is consistent with gestational dates. Fetal heart rate is auscultated at 140 beats per minute and fetal movement is palpable. She had a benign prenatal course except for a 1-hour, 151-mg/dL glucose screen at 28 weeks of gestation, followed by a normal 3-hour oral glucose tolerance test. A modified biophysical profile revealed a reactive nonstress test and an amniotic fluid index of 12 cm. The most appropriate next step in her management is

(A) twice weekly nonstress tests
(B) once weekly biophysical profile
(C) induction of labor
(D) reassurance

37

A 38-year-old woman, gravida 4, para 2, is seen at 29 weeks of gestation for generalized intense itching for the past week. The itching is worst on her hands and feet. She does not report any infectious contacts or new skin care products. Her temperature is 37.0°C (98.6°F), blood pressure is 135/85 mm Hg, and pulse is 90 beats per minute. She appears in no acute distress. Her sclerae are nonicteric and her oropharynx is normal. She has no rash. Her cervix is closed and long. The fetal heart rate is 135 beats per minute and reassuring. Urine dipstick test result is negative for protein. Laboratory evaluation reveals her white blood count is 9.0×10^9/L, hematocrit is 33%, and platelet count is 240,000/mm^3. Metabolic panel shows the serum alanine transaminase level is 55 units/L and the total bilirubin level is 0.7 mg/dL. The most appropriate diagnostic test is

(A) serum alkaline phosphatase
(B) serum ammonia
(C) serum bile acid levels
(D) serum glucose

38

A 26-year-old primigravid woman at 36 weeks of gestation has a platelet count of 62,000/mm^3 noted on routine blood work. She does not have a history of thrombocytopenia, easy bruising, menorrhagia, rash, or joint ache. She has a history of Raynaud phenomenon and chronic hypertension. Her only medication is prenatal vitamins. Her first-trimester laboratory results include a negative human immunodeficiency virus (HIV) test and a platelet count of 104,000/mm^3. Her blood pressure is 138/86 mm Hg and she has trace protein in her urine. Her hemoglobin and transaminase levels are normal. Physical examination is significant for mild pedal edema. The diagnosis that most likely explains her thrombocytopenia is

(A) gestational thrombocytopenia
(B) immune thrombocytopenic purpura
(C) preeclampsia
(D) systemic lupus erythematosus

39

A 38-year-old African American woman comes to your office for an incision check, 10 days after cesarean delivery for twins at term. The pregnancy was uncomplicated and her medical history is negative. She says she has fatigue, cough, generalized abdominal discomfort, and dyspnea that grows worse with exertion. On physical examination, blood pressure is 130/80 mm Hg and heart rate is 110 beats per minute; pedal edema is present. She is afebrile. The abdominal examination is nonfocal, and the incision is intact. You hear rales in both lung bases and note an occasional premature beat on auscultation of the heart. Chest X-ray shows cardiomegaly and increased pulmonary vascularity. Echocardiography shows a dilated left ventricle and an ejection fraction of 30%. The most important initial step in management is to administer

(A) furosemide
(B) supplemental oxygen with bed rest
(C) levosimendan
(D) bromocriptine mesylate

40

You performed a repeat cesarean delivery on a 36-year-old woman, gravida 2, para 2, this morning. She has a history of venous thromboembolism in a prior pregnancy and is homozygous for the factor V Leiden mutation. She was maintained during the pregnancy on adjusted-dose low molecular weight heparin. She is planning on breastfeeding and asks whether she can avoid injectable anticoagulation. After her discharge, the best medication for her postpartum anticoagulation therapy is

(A) warfarin sodium
(B) enoxaparin sodium
(C) heparin
(D) fondaparinux sodium
(E) aspirin

41

Gestational diabetes mellitus was diagnosed in a 32-year-old Latin American woman, gravida 1, at 28 weeks of gestation 2 weeks ago. She initiated a 2,000-kcal American Diabetes Association diet and has been monitoring her blood sugar with a home glucometer. Her fasting blood sugar ranges from 120 mg/dL to 140 mg/dL and her 2-hour postprandial sugar ranges from 170 mg/dL to 240 mg/dL. The best next step in management is

(A) increase the fiber content of her diet (35 g/day)
(B) begin a low carbohydrate diet (40 g/day)
(C) glyburide therapy
(D) insulin therapy
(E) initiate daily exercise regimen

42

A 32-year-old pregnant woman at 26 weeks of gestation comes to the labor and delivery unit with leakage of fluid. The fetal monitor shows a reassuring fetal heart rate tracing and no contractions. Sterile speculum examination reveals moderate clear fluid (nitrazine positive, fern on microscopy) in the vagina with a closed cervix. On removal of the speculum, a cluster of 3 shallow ulcers are noted on the right labium. The patient reports that this is her usual location of herpes outbreaks and that she has experienced burning in that area for 24 hours. The best next step in management is

(A) culture the lesions and await results
(B) administer betamethasone and perform cesarean delivery in 48 hours
(C) immediate cesarean delivery
(D) immediate antiviral therapy
(E) antiviral therapy at 34 weeks of gestation

43

A 26-year-old primigravid woman at 19 weeks of gestation comes to your office for a follow-up prenatal visit. She has three outdoor cats and is responsible for changing the cat litter. A week ago her family practice physician ordered toxoplasma serology. She tested positive for immunoglobulin M (IgM) antibodies but negative for immunoglobulin G (IgG) antibodies. She has read about the risks of toxoplasmosis in pregnancy and is concerned about transmission to the fetus. She has no systemic symptoms. The next step in her management related to this concern is

(A) detailed fetal anatomic ultrasonography
(B) toxoplasma antigen polymerase chain reaction testing of amniotic fluid
(C) maternal toxoplasma-specific IgG and IgM antibody testing at reference laboratory
(D) spiramycin treatment
(E) pyrimethamine–sulfadiazine treatment

44

A 34-year-old primigravid woman at 38 weeks of gestation comes to the hospital in active labor. She moved to the area recently and has not yet established prenatal care in your office. Her previous obstetrician called to inform her that her genital culture at 36 weeks of gestation was positive for group B streptococci (GBS). She has a penicillin allergy, which she describes as an itchy raised rash (hives). You obtain a copy of her culture report, which shows that the GBS isolate is sensitive to both erythromycin and clindamycin. The best antibiotic to use for GBS prophylaxis during her labor is

(A) cefazolin
(B) clindamycin
(C) erythromycin
(D) penicillin G
(E) vancomycin

45

A 30-year-old nulligravid woman presents to your office for preconception counseling. After 2 years together, she and her partner are ready to begin a family. She is human immunodeficiency virus (HIV)-negative and her partner is HIV-positive. The couple has been using condoms for contraception. She has no medical, surgical, or gynecologic history that would affect obstetric management. The best next step in management of this patient is to

(A) prescribe zidovudine
(B) counsel against pregnancy
(C) advise the couple to discontinue condom use
(D) refer for assisted reproductive technology (ART)
(E) recommend circumcision for the male partner

46

You are counseling a patient at 16 weeks of gestation who has been recently informed that she is pregnant with triplets after insemination using assisted reproductive technology (ART). The couple suffered from azoospermia. She smokes 10 cigarettes per day and works as a teacher's assistant at a preschool. She had a prepregnancy weight of 56.7 kg (125 lb). You advise her that the most effective lifestyle modification she could undertake to prevent the preterm birth of her triplets would be

(A) no sexual activity
(B) bed rest for 4 hours per day beginning at 20 weeks of gestation
(C) stop smoking
(D) gain more than 27 kg (60 lb)

47

A 30-year-old African American woman, gravida 3, para 0, at 12 weeks of gestation comes to the office to discuss her risk of recurrent preterm delivery. The current pregnancy was conceived with the use of in vitro fertilization (IVF). During her first pregnancy, she gave birth at 28 weeks of gestation and during her second pregnancy she gave birth at 29 weeks of gestation; both following the spontaneous onset of preterm labor. She had a loop electrosurgical excision procedure performed before her first pregnancy. She smokes 10–15 cigarettes a day. The risk factor that is most strongly associated with a future preterm delivery is her

(A) non-Hispanic black race
(B) current IVF conception
(C) obstetric history
(D) previous cervical surgery
(E) tobacco use

48

A 38-year-old woman, gravida 1, at 36 weeks of gestation is noted to have a fetus with a fetal heart rate of 170 beats per minute (bpm) at a prenatal visit. She has chronic hypertension treated with nifedipine XL and a history of Graves disease treated with radioactive iodine 3 years ago. Her blood pressure is 138/82 mm Hg, her pulse is 78 bpm, and temperature is 37°C (98.6°F). Her abdomen and uterine fundus are nontender. She has a hematocrit of 36%, her blood type is A, and she is Rhesus positive. An antibody screen result reveals the presence of anti-Lewis antibodies. A urinalysis result shows trace protein and is otherwise negative. You perform a nonstress test and the result indicates a fetal heart rate of 180 bpm, minimal variability and no accelerations or decelerations, but with sustained baseline tachycardia. The most likely explanation for this fetal heart rate pattern is

(A) nifedipine
(B) chorioamnionitis
(C) fetal hyperthyroidism
(D) isoimmunization
(E) preeclampsia

49

A dentist reports that your patient, at 26 weeks of gestation, has moderate periodontal disease, gingivitis, and no cavities. The dentist would like to treat the periodontal disease with surgical scaling and root planing in an attempt to improve the patient's pregnancy outcome. The dentist believes that treatment can lower the patient's risk of preterm birth. The patient had a medically indicated preterm birth at 35 weeks of gestation in her last pregnancy after a motor vehicle collision. Treatment of periodontal disease in the second trimester would most likely reduce the risk of

(A) preterm birth
(B) preeclampsia
(C) fetal growth restriction
(D) maternal tooth loss

50

A 27-year-old primigravid woman at 32 weeks of gestation is transported to the emergency department following a motor vehicle collision. She was the restrained driver of a vehicle that was struck at approximately 48 km/h (30 mph). She was wearing her seat belt below the uterine fundus and across her hips. Her car's air bags deployed in the collision. On initial evaluation, her abdomen is gravid with a fundal height of 31 cm. The abdomen is tender to palpation throughout. Pelvic examination reveals no vaginal bleeding; the cervix is closed and long. Ultrasonography shows a singleton gestation in cephalic presentation with normal amniotic fluid volume and a normal-appearing posterior placenta. Fetal heart tracing shows a baseline of 130 beats per minute without decelerations. Uterine monitoring shows uterine contractions every 20–25 minutes. Kleihauer-Betke testing is normal and her blood type is O positive. The factor in this case that most strongly indicates the need for prolonged observation and monitoring is

(A) abdominal tenderness
(B) air bag deployment
(C) posterior placental location
(D) use of seat belt
(E) uterine contractions

51

A 38-year-old African American woman, gravida 3, para 2, with a body mass index (calculated as weight in kilograms divided by height in meters squared [kg/m^2]) (BMI) of 34 returns to your office for prenatal care at 18 weeks of gestation. Her previous pregnancy 3 years ago was complicated by a diagnosis of gestational diabetes mellitus. In that pregnancy, she eventually required insulin therapy to control her blood sugar. She discontinued the insulin after giving birth to a 3.9-kg infant. Since that delivery, she has avoided desserts and takes a daily 45-minute walk. She had a negative screen result in the postpartum period and a normal 50-g glucose tolerance test in the first trimester. The best next step in management is to

(A) perform a 50-g glucose tolerance test now
(B) perform a 50-g glucose tolerance test at 26 weeks of gestation
(C) initiate a very low carbohydrate diet (less than 30 g/day)
(D) initiate empiric metformin therapy
(E) perform urinary glucose screening test

52

A 23-year-old primigravid woman presents to your office at 20 weeks of gestation with fatigue, photophobia, a rash on her face, and new onset pain in several metatarsal joints and her wrist. Her blood pressure is 130/80 mm Hg and she has new onset 1+ proteinuria. On physical examination, her painful metatarsal joints appear to be swollen. The most likely diagnosis is

(A) Sjögren syndrome
(B) systemic lupus erythematosus (SLE)
(C) carpal tunnel syndrome
(D) rheumatoid arthritis
(E) osteoarthritis

53

A 29-year-old woman, gravida 2, para 1, comes to see you for an urgent prenatal visit at 19 weeks of gestation. She is a teacher at an elementary school. In the past week, two children in her class have been diagnosed with parvovirus infection. The woman feels well, has had no rash or systemic symptoms, and does not have a fever. Parvovirus serology reveals negative immunoglobulin G (IgG) and immunoglobulin M (IgM) antibody titers. With regard to concerns related to parvovirus testing, the most appropriate next step is

(A) repeat parvovirus antibody serology in 2–4 weeks
(B) parvovirus DNA polymerase chain reaction (PCR) testing
(C) detailed fetal anatomic survey
(D) serial fetal middle cerebral artery Doppler velocimetry

54

A 30-year-old woman, gravida 3, para 2, at 8 weeks of gestation visits your office for prenatal care. She immigrated to the United States from Central America 6 months ago. She reports that she was vaccinated with the bacille Calmette-Guérin (BCG) vaccine as a child. She has had no cough, night sweats, or weight loss. She is human immunodeficiency virus (HIV) negative. The best option for tuberculosis (TB) screening in this woman is

(A) tuberculin skin testing
(B) chest X-ray with abdominal shield
(C) three first-morning sputums
(D) induced sputum for acid-fast bacilli stain
(E) observation for development of symptoms

55

A patient is admitted in preterm labor at 23 weeks of gestation with advanced cervical dilatation of 4 cm. The hospital in which you are caring for this patient does not resuscitate babies who are born before 24 weeks of gestation, whereas the other hospital across town does resuscitate babies who are born at or after 22 weeks of gestation. The patient has done internet research and is aware of the latter hospital's policy. She requests transfer as she wants "everything done" on behalf of her unborn child. After checking with the other hospital, conditions will allow her transport. In addition to neonatal consultation, the best next step in her management should be

(A) maternal transport
(B) neonatal transport
(C) legal consultation
(D) ethics committee consultation

56

A 29-year-old woman, gravida 2, para 0, presents at 37 weeks of gestation with decreased fetal movement for 8 hours. The pregnancy has been uncomplicated to date. The nonstress test is reactive, but several brief variable decelerations are present. In order to assess her amniotic fluid (AF) volume, the most appropriate test is

(A) AF index
(B) single deepest pocket
(C) three-dimensional ultrasonography
(D) two-diameter pocket technique

57

A pregnant patient at 8 weeks of gestation comes to your office during the influenza season and inquires about influenza vaccination. She would like to receive the vaccine if you feel it is safe for her to receive it. She is afraid of injections and prefers the nasal spray administration route. As her physician you inform her that she should receive

(A) nasal spray vaccine after 12 weeks of gestation
(B) injectable vaccine after 12 weeks of gestation
(C) injectable vaccine today
(D) nasal spray vaccine today
(E) no vaccine

58

A woman of Eastern European Ashkenazi Jewish descent is planning pregnancy. In addition to carrier screening for Tay–Sachs disease, Canavan disease, and cystic fibrosis, the American College of Obstetricians and Gynecologists recommends offering her carrier screening for

(A) Gaucher disease
(B) Bloom syndrome
(C) mucolipidosis IV
(D) familial dysautonomia
(E) Fanconi anemia group C

59

A 37-year-old woman, gravida 2, para 1, comes to your office at 30 weeks of gestation with crampy abdominal pain and postprandial diarrhea. Before her pregnancy, she underwent Roux-en-Y gastric bypass surgery and lost 38.6 kg (85 lb). Her prepregnant body mass index (calculated as weight in kilograms divided by height in meters squared [kg/m^2]) (BMI) was 32.4. The pregnancy has been uncomplicated, and all of her obstetric laboratory values have been within normal limits. She is afebrile and her abdominal examination is unremarkable. The most likely source of her symptoms is

(A) bowel obstruction
(B) severe nutritional deficits
(C) anastomotic leak
(D) dumping syndrome

60

A 30-year-old woman, gravida 3, para 2, comes to labor and delivery 7-cm dilated in active labor at 22 0/7 weeks of gestation. After discussion with the neonatologist regarding the lengthy hospital course, number of invasive procedures, and likely poor quality of life if the neonate survived, the parents request comfort care only for their premature newborn. The ethical principle that best guides the parents' decision making is

(A) beneficence
(B) nonmaleficence
(C) justice
(D) autonomy

61

A 19-year-old primigravid woman with asthma comes to you for a routine prenatal visit in the second trimester. She requests a refill of her prescription for albuterol. You inquire further and find that she has been using her albuterol metered dose inhaler up to 4 times a day for the past 2 weeks; this will be her third albuterol refill in a month. The most appropriate next step is to

(A) substitute a long-acting β_2-agonist
(B) refill her albuterol prescription alone
(C) alter the albuterol delivery method to nebulizer
(D) add an inhaled corticosteroid
(E) add theophylline

62

A 33-year-old woman, gravida 3, para 2, at 32 6/7 weeks of gestation is referred for ultrasonography for fetal growth because of a fundal height measuring 28 cm. First-trimester risk assessment demonstrated low risks for Down syndrome and trisomy 18. She has had chronic hypertension for 5 years, controlled with labetalol hydrochloride twice daily during this pregnancy. Her blood pressure today is 134/82 mm Hg. Ultrasonography demonstrates a fetus with an estimated fetal weight in the 7th percentile. Amniotic fluid index is 8.2 cm and the biophysical profile is 8/8. The best umbilical artery Doppler parameter to aid assessment for delivery is

(A) peak systolic velocity
(B) end diastolic flow
(C) pulsatility index
(D) systolic/diastolic (S/D) ratio

63

A 38-year-old woman, gravida 3, para 1, at 24 weeks of gestation comes to your clinic for a routine prenatal visit. She reports a planned overseas business trip next week. Her obstetric history identifies two previous spontaneous preterm deliveries at 28 weeks and 27 weeks of gestation. Her current pregnancy is complicated by asthma, which is controlled with intermittent albuterol use. You advise her that she should avoid air travel primarily because of concerns related to

(A) hypoxia
(B) preterm delivery
(C) radiation exposure
(D) thrombosis

64

A 24-year-old primigravid woman at 39 weeks of gestation comes to the hospital in active labor. She requests epidural analgesia. Aside from hypotension, the most likely complication to be associated with her epidural anesthesia is

(A) cesarean delivery
(B) chronic back pain
(C) fetal heart rate decelerations
(D) fever
(E) postdural puncture headache

65

During the birth of her first child, a patient experienced a shoulder dystocia relieved by McRoberts maneuver and delivery of the posterior arm. In the patient's next pregnancy, she would like to have another vaginal delivery. You counsel her that the recurrence risk of shoulder dystocia is approximately

(A) 1–5%
(B) 10–15%
(C) 25–35%
(D) greater than 50%

66

A 27-year-old woman, 2 weeks postpartum, comes to your office with fever and pain in the left breast. She has been exclusively breastfeeding since giving birth. She has no known drug allergies. Her temperature is 39°C (102°F). You observe a wedge-shaped area of redness and tenderness on the upper outer quadrant of the left breast and no discrete mass is palpated. The right breast is unremarkable. After 2 days of antibiotic therapy with dicloxacillin and no improvement, a breast milk culture reveals methicillin-resistant *Staphylococcus aureus* (MRSA). The best next step in pharmacotherapy is to prescribe

(A) cefazolin
(B) cephalexin
(C) erythromycin
(D) amoxicillin–clavulanate
(E) trimethoprim–sulfamethoxazole

67

A 29-year-old primigravid woman presents with unilateral leg edema and dyspnea at 24 weeks of gestation. A pulmonary embolus is diagnosed by means of computed tomography angiography. At admission, she had a platelet count of 289,000/mm^3. Unfractionated intravenous heparin was begun; 3 days later, she reports generalized easy bruisability and is found to have a platelet count of 40,000/mm^3. In addition to stopping heparin, the best next step in her management is

(A) change to warfarin
(B) placement of a vena caval filter
(C) change to fondaparinux sodium
(D) administer protamine sulfate

68

During a review with your office staff of next year's business plan you solicit ideas for adding new sources of revenue. You are considering beginning an off-site facility that offers fetal keepsake three-dimensional ultrasonographic scans and videos. After reviewing statements from the American College of Obstetricians and Gynecologists, the U.S. Food and Drug Administration, and the American Institute of Ultrasound in Medicine, you note that they

(A) discourage this activity because of the nonmedical use of diagnostic equipment
(B) have no opinion on this commercial enterprise
(C) support such activities only if proper supervision can be assured
(D) require the same level of record documentation as in an office setting

69

A 30-year-old woman, gravida 5, para 4, comes to the hospital at 35 weeks of gestation with decreased fetal movement. Her prior pregnancies were uncomplicated and she has no medical problems. Midtrimester anatomy ultrasonography showed choroid plexus cyst and fetal heart defect. She declined genetic testing and her prenatal laboratory results were otherwise normal. Fetal monitoring and ultrasonography reveal absent fetal heart beat, and a diagnosis of fetal demise is made. Her vital signs are normal including a blood pressure reading of 110/70 mm Hg. The test(s) most likely to be informative regarding the cause of the stillbirth is (are)

(A) maternal protein S and protein C levels
(B) hemoglobin A_{1C}
(C) amniocentesis for karyotype
(D) complete blood count with platelets and urinalysis for protein and liver enzymes
(E) titers for toxoplasmosis, other viruses, rubella, cytomegalovirus, herpes simplex viruses

70

An obese primigravid 18-year-old woman is admitted to the hospital nonresponsive after a seizure. She is at 36 weeks of gestation by bedside ultrasonography. Breathing is stertorous and pulse oximetry is 80% on room air. Blood pressure is 180/110 mm Hg. A portable chest X-ray result is negative. You administer magnesium sulfate and decide to perform a cesarean delivery because of eclampsia and because the fetus is in breech presentation. General anesthesia is induced and the trachea is intubated. During the procedure, the anesthesiologist reports difficulty maintaining oxygen saturation at greater than 85%. The most likely explanation is

(A) pulmonary edema
(B) acute respiratory distress syndrome (ARDS)
(C) aspiration
(D) mainstem intubation
(E) anaphylaxis

71

You are covering your labor and delivery unit (level 1 nursery) when a patient arrives by ambulance. She reports that she is "7 months along" and has been experiencing abdominal pain for several days. She also thinks that she has had vaginal fluid leakage. Maternal vital signs are stable and there is no evidence of bleeding. Ultrasonography indicates a 28-week fetus, a transverse lie, and an amniotic fluid index of 2 cm. External monitoring shows contractions every 4–8 minutes, and a Category III fetal heart rate tracing. The fetal heart rate tracing does not improve with maternal oxygen supplementation, position change, or intravenous fluids. Her cervix is 1 cm dilated. The best next step in management is

(A) arrange transfer to a tertiary care center
(B) amniotransfusion
(C) expeditious delivery at your facility
(D) tocolysis

72

A 36-year-old woman, gravida 1, para 0, at 32 weeks of gestation with known systemic lupus erythematosus (SLE) comes to your office for a routine prenatal visit. She has lupus nephritis with 2 g of protein in 24 hours. Her pregnancy has thus far proceeded normally although she has experienced mild arthritic symptoms with pain and discomfort in her joints. She has been taking no medication for her SLE other than nonsteroidal antiinflammatory drugs. She is now experiencing headache and increased pedal edema (+3). She is found to have hypertension (blood pressure 150/100 mm Hg) and her temperature is 38.1°C (100.6°F). Her laboratory results show a hemoglobin level 10.2 g/dL, platelet count 160,000/mm^3, glucose level 98 mg/dL, and an increased 24-hour urinary protein of 4 g. Her levels of ammonia, liver enzymes, lactate dehydrogenase, and bilirubin are all in the normal range. The most likely diagnosis is

(A) hemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome
(B) thrombotic thrombocytopenia purpura (TTP)
(C) hemolytic uremic syndrome (HUS)
(D) exacerbation of SLE
(E) acute fatty liver of pregnancy

73

A 26-year-old woman, gravida 1, at 18 weeks of gestation consults you because of headache. The pain is unilateral, throbbing in nature, and worsens with movement of her head, light, and sound. She has no nausea, visual changes, nasal congestion, or lacrimation. Her headache is episodic, occurs approximately 1–2 times per month, and is relieved by ibuprofen. The most likely type of headache is

(A) sinus
(B) cluster
(C) tension
(D) migraine
(E) hemicrania continua

74

A 32-year-old African American woman with a history of gluten intolerance returns to the office for a prenatal visit at 28 weeks of gestation. In the first trimester, she was diagnosed with anemia. She had a hemoglobin level of 8.9 g/dL, hematocrit level of 27.3%, mean corpuscular volume of 78.5 fL, serum ferritin level 18.6 micrograms/L, and hemoglobin electrophoresis with 97% hemoglobin A. She has been taking oral ferrous sulfate twice daily since the first trimester. Repeat hemoglobin and hematocrit levels are 8.3 g/dL and 25.4%, respectively. The most appropriate next step in management is

(A) oral ferrous sulfate three times daily
(B) oral folic acid in addition to the current iron supplements
(C) subcutaneous erythropoietin
(D) intravenous ferric gluconate
(E) blood transfusion

75

A 26-year-old woman, gravida 3, para 2, at 38 weeks of gestation comes to your office for an unscheduled prenatal care visit because of severe itching over her whole body, including her palms and soles. On physical examination, her blood pressure is normal and she has no right upper quadrant pain. Her urinalysis result is negative for protein. Three days later, her laboratory test results show increased serum bile acids (58 mmol/L), normal liver enzymes, and normal testing for hepatitis A, hepatitis B, and hepatitis C. The most appropriate next step in management is

(A) 24-hour urine collection for protein and creatine clearance
(B) biophysical profile testing
(C) proceed to delivery
(D) diphenhydramine therapy
(E) amniocentesis for fetal lung maturity assessment

76

A 33-year-old woman, gravida 4, para 1, at 18 weeks of gestation presents for her first prenatal visit. She has a history of rhesus (Rh) alloimmunization with delivery of an anemic neonate that required exchange transfusion after birth in her most recent pregnancy. She reports certain paternity and that her husband is a known RhD homozygote. The most appropriate next step in management is to assess

(A) amniotic fluid ΔOD_{450}
(B) fetal hemoglobin level
(C) fetal middle cerebral artery peak systolic velocity
(D) fetal RhD antigen status
(E) the maternal anti-D titer

77

A 36-year-old woman, para 1, at her 6-week postpartum visit wishes to discuss contraceptive options, including sterilization. She has a body mass index (calculated as weight in kilograms divided by height in meters squared [kg/m^2]) (BMI) of 52. Before her pregnancy, she experienced heavy menstrual bleeding for several years. The best management is

(A) vasectomy in her partner
(B) levonorgestrel-releasing intrauterine system (levonorgestrel intrauterine device [IUD])
(C) hysteroscopic sterilization
(D) combination oral contraceptive
(E) laparoscopic tubal sterilization

78

A 32-year-old woman, gravida 2, para 0, at 30 weeks of gestation with a dichorionic twin gestation presents with nausea and vomiting, right upper quadrant pain, and moderate vaginal bleeding. She has not experienced contractions or vaginal fluid leak. On examination, her blood pressure (BP) is 152/100 mm Hg and she appears in moderate distress with hyperreflexia and pitting edema of the lower extremities. Fetal tracing is reactive for both twins. Laboratory results show a platelet count of 64,000/mm^3, aspartate aminotransferase of 320 international units/L, alanine aminotransferase of 280 international units/L, creatinine of 1.3 mg/dL, lactate dehydrogenase of 700 international units/L, fibrinogen of 80 mg/dL, and prothrombin time of 18 seconds. In addition to administration of steroids, the most appropriate next step is

(A) delivery after completion of fetal lung maturity
(B) delivery at 34 weeks of gestation
(C) delivery after completion of steroids administration
(D) immediate delivery

79

A 29-year-old woman, gravida 3, para 2, at 34 weeks of gestation comes to your office with a newly discovered mobile, slightly tender 2-cm lump in her left breast that is confirmed on physical examination. There was no skin dimpling or axillary adenopathy and her right breast examination was normal. The rest of her history and physical examination are unremarkable. The best next step in management is

(A) initiate oral antibiotics
(B) mammography now
(C) ultrasonography now
(D) postpartum mammography

80

A postpartum ward nurse calls to tell you that the patient you delivered at term 12 hours ago has a temperature of 38.3°C (101°F). She had a cesarean delivery with no complications. She lost an estimated 800 cc of blood. You review her chart and medical history. The best next step in management is

(A) complete blood count, urinalysis, and chest X-ray
(B) acetaminophen and observation
(C) broad-spectrum antimicrobial coverage
(D) examination of the patient

81

A patient presents for preconception counseling. She had peripartum cardiomyopathy with an ejection fraction of 20% after her most recent delivery. She took a β-blocker, an angiotensin-converting enzyme (ACE) inhibitor, and a diuretic for 2 years and her heart fully recovered. Her most recent echocardiogram revealed an ejection fraction of 60%. She wants to know her recurrence risk of cardiomyopathy in a future pregnancy. You advise her that her recurrence risk is approximately

(A) less than 1%
(B) 5–15%
(C) 20–30%
(D) 40–50%
(E) 60–70%

82

A 31-year-old woman, gravida 3, para 2, presents for decreased fetal movement at 39 3/7 weeks of gestation. She has a history of one prior spontaneous vaginal delivery followed by a primary low-transverse cesarean delivery for breech presentation. You have monitored her pregnancy and have discussed her option of trial of labor after cesarean delivery (TOLAC). She favors a vaginal delivery for this pregnancy and also desires more children in the future. Nonstress testing demonstrates a reactive fetal heart rate with baseline of 130 beats per minute. Ultrasonography shows vertex cephalic presentation and oligohydramnios with an amniotic fluid index of 1.5 cm. Vaginal examination reveals a cervix that is 1 cm dilated, 20% effaced, posterior, and soft. Fetal station is –3. In this scenario, the most appropriate next step in management is

(A) vaginal misoprostol
(B) intravenous oxytocin
(C) transcervical Foley balloon
(D) repeat cesarean delivery
(E) expectant management

83

Pregnant women should be offered human immunodeficiency virus (HIV) testing as part of the routine package of prenatal laboratory tests. Women with high-risk behavior factors who require an additional third-trimester test possess the characteristic of

(A) homelessness
(B) hepatitis C virus
(C) emigrant from a high-prevalence region
(D) residence in a high-prevalence area

84

A 30-year-old multiparous woman with a history of chronic hypertension discontinued her usual medications when she learned she was pregnant. At her prenatal visit at 22 weeks of gestation, her blood pressure (BP) is 148/90 mm Hg. Urine dipstick shows no protein. She reports no other medical problems. The best next step in her management is

(A) no medication
(B) methyldopa
(C) labetalol
(D) magnesium sulfate

85

A 34-year-old woman has a known twin pregnancy. Her referring physician noted discordant growth on 20-week ultrasonography. The set of ultrasonographic findings most consistent with twin–twin transfusion syndrome is

(A) twin peak sign, twin B with fetal growth restriction, and renal anomaly
(B) twin peak sign, decreased amniotic fluid twin B, and hydramnios twin A
(C) thin dividing membrane, twin B with fetal growth restriction, and renal anomaly
(D) thin dividing membrane, decreased amniotic fluid twin B, and hydramnios twin A

86

A 32-year-old woman, gravida 3, para 2, at 33 weeks of gestation comes to your hospital's emergency department for evaluation of abdominal pain. She has had episodic abdominal, back, and flank pain for 2 days, associated with malaise, nausea, and vomiting. She has noticed increased uterine cramping and contractions. Her temperature is 38.2°C (100.8°F). She is normotensive with a pulse of 110 beats per minute, and a respiratory rate of 20 breaths per minute. She appears uncomfortable but is in no acute distress. She is slightly diaphoretic with a normal cardiopulmonary examination. Her abdomen is gravid, with pronounced tenderness in the lower quadrants and right flank. Cervical examination shows a 1-cm cervix, 20% effaced, and the presenting part is ballotable. The fetal heart rate is 160 beats per minute and reassuring. Uterine monitoring shows irregular contractions. Laboratory evaluation reveals a white blood cell count of 16.3×10^9/L with an increase in neutrophils and a hematocrit of 33%. The urinalysis is notable for trace blood and leukocyte esterase. The most appropriate next diagnostic test is

(A) amniocentesis
(B) computed tomography (CT)
(C) magnetic resonance imaging (MRI)
(D) ultrasonography

87

A patient visits you for preconception counseling. She is healthy with no remarkable medical history. She smokes a pack of cigarettes a day. She has tried to quit many times but has been unsuccessful. She has been taking varenicline for 1 month as prescribed by her family physician. She is taking no other medication. She reports frequent crying episodes and difficulty getting out of bed. When depressive symptoms occur in a patient who is taking varenicline, the best next step in management is

(A) offer the patient supportive care
(B) discontinue varenicline
(C) add a selective serotonin reuptake inhibitor
(D) decrease the dose of varenicline

88

A woman at 19 weeks of gestation visits your office. She has had general malaise for several days with nausea and vomiting, right side back pain, fever, and chills. Physical examination reveals a temperature of 39.5°C (103°F), respiratory rate of 16 breaths per minute, pulse of 115 beats per minute, and blood pressure of 120/80 mm Hg. She demonstrates costovertebral angle (CVA) tenderness and a normal abdominal examination. She has good capillary refill. Her uterus is at the umbilicus and nontender. The fetal heart rate is 180 beats per minute. Her complete blood count reveals a white blood count of 16,000/mm^3. Microscopic urinalysis shows many white blood cells and bacteria per high power field. The most likely diagnosis is

(A) appendicitis
(B) cystitis
(C) sepsis
(D) chorioamnionitis
(E) pyelonephritis

89

A 34-year-old woman with a history of relapsing and remitting multiple sclerosis sees you for a preconception consultation. She asks about the chance of having a relapse during pregnancy. You inform her that her chance of relapse is highest during the

(A) first trimester
(B) second trimester
(C) third trimester
(D) postpartum period

90

A 26-year-old primigravid woman at 30 weeks of gestation presents with palpitations. Electrocardiogram and thyroid-stimulating hormone level are normal. Maternal echocardiogram demonstrates mitral valve prolapse with mild mitral regurgitation. She has no other cardiac abnormalities. She has a history of rash with penicillin use. Based on current American Heart Association recommendations for subacute bacterial endocarditis prophylaxis, at delivery she should be prescribed

(A) ampicillin
(B) cefazolin
(C) clindamycin
(D) vancomycin and gentamicin
(E) no antibiotic prophylaxis

91

A 26-year-old woman, gravida 2, para 1, visits you for prenatal care at 9 weeks of gestation estimated by her last menstrual period. You perform ultrasonography, which demonstrates a twin pregnancy, with a dividing membrane between both fetuses, consistent with menstrual dating. At this gestational age, the most sensitive and specific ultrasonographic sign to diagnose a monochorionic pregnancy is

(A) number of yolk sacs
(B) "T" sign at the membrane insertion
(C) fetal sex determination
(D) a single placenta

92

A 31-year-old woman, gravida 2, para 1, comes to the labor unit in active labor at 37 weeks of gestation. She progresses normally through labor and delivers the fetal head, which retracts back against the perineum. Downward traction does not produce any further progress. The nurses position the patient with her legs hyperflexed and abducted and provide suprapubic pressure. If delivery does not occur, the next step should be

(A) additional traction
(B) cesarean delivery
(C) lateral head displacement
(D) posterior arm delivery
(E) proctoepisiotomy

93

A 24-year-old Hispanic woman reports alcohol use during pregnancy. She is a college graduate and works for a nonprofit agency making approximately $45,000 a year. The demographic factor most associated with her use of alcohol in pregnancy is

(A) age
(B) income
(C) ethnicity
(D) education

94

A 30-year-old woman, gravida 2, para 1, presents for her first prenatal visit. She has a history of intravenous illicit drug use. Hepatitis C antibody is drawn with her prenatal laboratory testing. The hepatitis C antibody returns a positive test result. The patient is concerned about vertical transmission to her fetus. You inform her that the factor associated with the highest risk of vertical transmission of hepatitis C to her fetus is

(A) co-infection with hepatitis B
(B) use of fetal scalp electrode
(C) prolonged rupture of membranes
(D) elevated liver enzymes
(E) coexistent human immunodeficiency virus (HIV) infection

95

A healthy young woman underwent a forceps delivery of a 4,200-g infant and the repair of vaginal lacerations. She is group B *Streptococcus* positive and is currently being treated with penicillin. She is estimated to have lost 1.5 L of blood. She responds temporarily to 3 L of isotonic crystalloid and medical therapy, but a further postpartum hemorrhage necessitates exploratory laparotomy. In the operating room, a broad ligament hematoma is identified along with uterine atony, and another 3 L of blood loss is estimated. During the repair, blood pressure is maintained with another 3 L of crystalloid and 5 units of packed red blood cells. The suture line shows oozing. An intraoperative complete blood count reveals a white blood cell count of 17,000/muL, hemoglobin of 5.8 g/dL, hematocrit of 18%, and platelets of 42,000/mm^3. The most likely cause of thrombocytopenia in this patient is

(A) disseminated intravascular coagulopathy
(B) dilutional coagulopathy
(C) hemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome
(D) sepsis

96

A 31-year-old woman, gravida 3, comes to your office at 19 weeks of gestation with pelvic pressure. She has not experienced contractions or vaginal fluid leak. Her first pregnancy resulted in a term delivery by forceps. A large cervical defect was identified during her initial office visit at 16 weeks of gestation in her second pregnancy. She ultimately gave birth at 21 weeks of gestation secondary to painless cervical dilation. On evaluation of the current pregnancy, her uterus is soft and nontender. Speculum examination reveals a large cervical defect extending from her external os to the cervical vaginal junction. Copious white vaginal discharge with a pH less than 4.5, multiple white blood cells, and rare clue cells are seen on wet prep but yeast is absent. Her cervix is long, closed, soft, and in mid position. Transvaginal ultrasonography shows cervical funneling with a cervical length of 2.1 cm. The condition that would most likely explain these findings is

(A) bacterial vaginosis
(B) cervical insufficiency
(C) preterm labor
(D) uterine anomaly
(E) intrauterine infection

97

A 26-year-old woman, gravida 3, para 0, visits your office for evaluation of recurrent pregnancy loss. She has had three early pregnancy losses. Her first loss was a spontaneous abortion at 9 weeks of gestation. The second loss was identified as an early demise of a normal-appearing embryo on ultrasonography at 8 weeks of gestation. Her third loss was another spontaneous abortion at 9 weeks of gestation for which karyotypic analysis was normal. Her medical history is negative for chronic illnesses or any surgery. Parental karyotypes are normal. Physical examination is unremarkable; her cervix appears normal and there are no adnexal masses palpated. In addition to testing for uterine abnormalities, her evaluation should include testing for

(A) alloimmune abnormalities
(B) antiphospholipid syndrome
(C) diabetes mellitus
(D) inherited thrombophilia
(E) thyroid disease

98

A 28-year-old woman, gravida 2, para 1, at 39 weeks of gestation is undergoing a trial of labor after cesarean delivery. Her first child was a breech delivery infant weighing 3,750 g at 37 weeks of gestation, and the operative report confirms that she had a low transverse incision. This labor was spontaneous and has progressed normally. During this trial of labor, the most common sign of uterine rupture is

(A) tachysystole
(B) vaginal bleeding
(C) worsening fetal heart rate pattern
(D) loss of fetal station
(E) new onset severe abdominal pain

99

A 27-year-old woman, gravida 3, para 2, at 34 weeks of gestation currently receives prophylactic low molecular weight heparin. She is a heterozygous carrier for the factor V Leiden mutation, with a family history of deep vein thrombosis in her mother and sister, although she has no personal history of thromboembolism. She had two prior cesarean deliveries at 38 weeks and 37 weeks of gestation and is planning to have a repeat cesarean delivery at 39 weeks of gestation. To optimize her chances for regional anesthesia in the event of an unplanned cesarean delivery, the best approach to management of her anticoagulation would be

(A) continuation of low molecular weight heparin, including on the day of surgery
(B) continuation of low molecular weight heparin and addition of protamine sulfate 2 hours before surgery
(C) switch to prophylactic unfractionated heparin at 36 weeks of gestation
(D) discontinuation of anticoagulation at 36 weeks of gestation
(E) switch to low-dose aspirin in the week of her surgery

100

A primiparous woman at 39 weeks of gestation has been undergoing induction for gestational hypertension. Her pregnancy was otherwise uncomplicated. Despite adequate contractions, she remained in the latent phase for 12 hours but has progressed to 4–5 cm/–1 station over the past 3 hours. Her fetal heart rate (FHR) monitor strip is shown in Fig. 100-1. A cervical re-examination shows dilation of 5 cm; her examination is otherwise unchanged. Oxytocin has been discontinued and the patient has moved to the left lateral recumbent position. Her vital signs are normal. The intervention that is most appropriate given this FHR pattern is

(A) supplemental maternal oxygen
(B) amnioinfusion
(C) immediate cesarean delivery
(D) observation
(E) tocolytic therapy

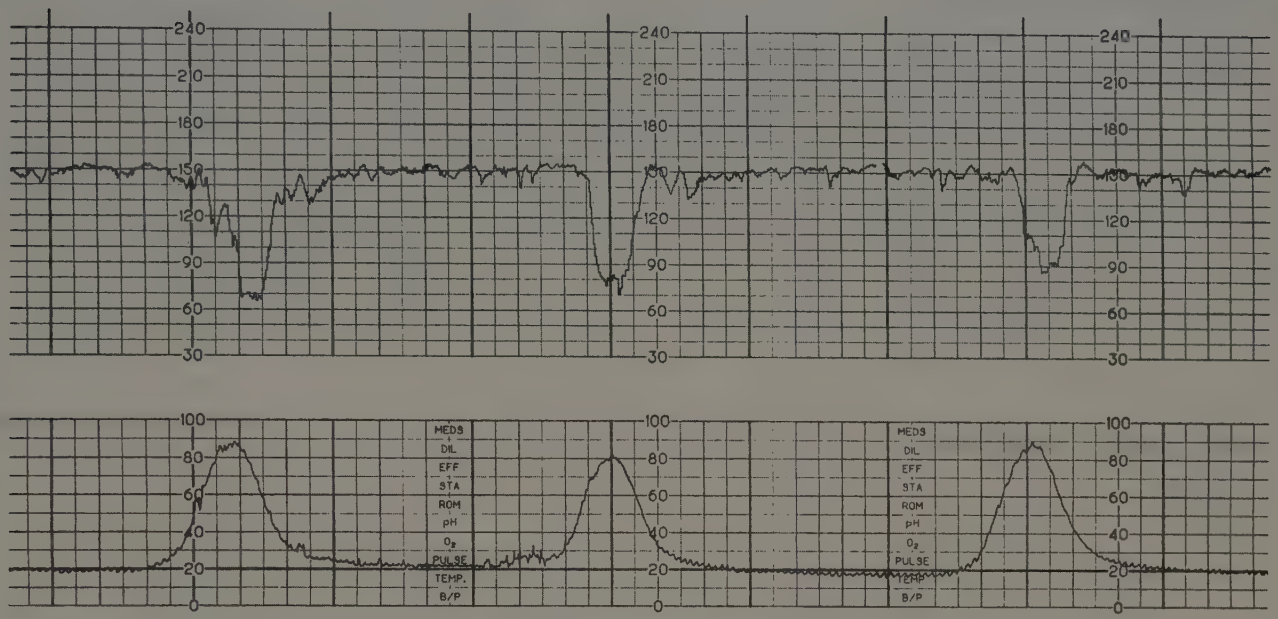


Fig. 100-1

101

A 35-year-old woman, gravida 1, comes to your office for a routine prenatal visit at 34 weeks of gestation. Her prenatal course to date has been unremarkable. Ultrasonography done at 18 weeks of gestation reported no abnormalities. She was found to be Rh negative after an initial negative antibody screen. Her 1-hour glucose challenge was 129 mg/dL. Her fundal height measures 38 cm. Ultrasonography for uterine size greater than gestational dates demonstrates an amniotic fluid index of 29 cm and isolated hydramnios. The most likely cause of this condition is

(A) idiopathic
(B) esophageal obstruction
(C) isoimmunization
(D) gestational diabetes mellitus
(E) placental tumor

102

A 27-year-old woman at 7 weeks of gestation is on multiple medications to control her seizures. You counsel her that the antiepileptic drug with the highest teratogenic risk is

(A) phenytoin
(B) valproate
(C) lamotrigine
(D) levetiracetam
(E) carbamazepine

103

A 23-year-old primigravid woman comes to your office to establish prenatal care. She has had regular menstrual cycles that she recorded in her daily calendar. Her last menstrual period dating places her at 11 3/7 weeks of gestation. She requests first-trimester aneuploidy screening. Her nuchal translucency measurement is normal, but the ultrasonographic determination of gestational age, as measured by composite biometric data, is 13 4/7 weeks. While reviewing her records, you find that she made a visit to the emergency department when she was at 7 4/7 weeks of gestation by menstrual criteria. The visit included ultrasonography that showed a singleton pregnancy with a crown–rump length consistent with 9 0/7 weeks of gestation. The parameter that will best establish gestational age for this patient is the

(A) 9-week ultrasonography
(B) 13-week ultrasonography
(C) last menstrual period
(D) 16-week ultrasonography

104

A 21-year-old primigravid woman comes to the hospital at 38 weeks of gestation in active labor. Her genital culture for group B streptococcus is negative. Because of arrest of the active phase at 8 cm dilation, you decide to perform a cesarean delivery. Surgical antibiotic prophylaxis should be administered

(A) before skin incision
(B) at cord clamping
(C) after peritoneal incision
(D) at skin closure

105

A 19-year-old primigravid woman presents at 37 weeks of gestation. She reports uterine contractions for the past 6 hours but appears comfortable. On external uterine monitoring, the patient is contracting irregularly every 7–15 minutes and the fetal heart rate tracing is Category I. The cervix is 1 cm dilated and 50% effaced, with a vertex presentation at –3 station. The best next step in management is

(A) oxytocin administration
(B) prostaglandin administration
(C) artificial rupture of membranes
(D) observation

106

A 32-year-old woman, gravida 4, para 3, comes to see you for a routine anatomical survey at 21 weeks of gestation. Her pregnancy has been uncomplicated thus far. She is healthy and has had three prior vaginal deliveries at term. The anatomical survey is normal and the fetus shows normal growth. An anterior placenta previa is suspected transabdominally. The next most appropriate management step would be to perform

(A) color flow Doppler ultrasonography
(B) magnetic resonance imaging (MRI)
(C) repeat transabdominal ultrasonography in 2 weeks
(D) transvaginal ultrasonography
(E) three-dimensional ultrasonography

107

A 25-year-old woman, gravida 2, visits your office at 14 weeks of gestation for advice about nutrition during her pregnancy. You advise her that the U.S. Food and Drug Administration (FDA) has studied mercury levels in king mackerel, salmon, swordfish, tilefish, and tuna. You tell her that the FDA found that the fish likely to have the lowest mercury level is

(A) king mackerel
(B) salmon
(C) swordfish
(D) tilefish
(E) tuna

108

A 30-year-old woman, gravida 2, para 1, comes to see you for a prenatal visit and tells you that she has persistent nausea and vomiting, particularly early in the day. She is at 8 weeks of gestation and has a normal intrauterine pregnancy on ultrasonography. She has been taking vitamin B_6 for 2 weeks since finding out she was pregnant, and has not had any weight changes. Urine dipstick test result is negative for ketones, her pulse is normal, and orthostatic measurements are normal. The most appropriate next step for treatment is

(A) intravenous fluids
(B) parenteral nutrition
(C) doxylamine succinate
(D) methylprednisolone
(E) ondansetron hydrochloride

109

A 26-year-old primigravid woman is undergoing induction of labor for severe preeclampsia at 39 weeks of gestation. She has an epidural catheter in place and is on a continuous infusion of a local anesthetic. She is receiving magnesium sulfate for seizure prophylaxis at 2 g/hour. She has sudden cardiac collapse and the anesthesiologist believes that she has had an amniotic fluid embolus. The most common presenting symptom of amniotic fluid embolus is

(A) ventricular arrhythmia
(B) coagulopathy
(C) sinusoidal fetal heart rate pattern
(D) hematuria
(E) maternal hypoxemia

110

A 22-year-old primigravid woman at 20 weeks of gestation was found to have a cervical length of 26 mm with funneling noted at her routinely scheduled anatomic survey. A repeat ultrasonographic scan 2 weeks later revealed a cervical length of 15 mm. She has experienced no contractions, vaginal bleeding, or leakage of vaginal fluid. Speculum examination was negative for membrane rupture or prolapsed membranes. Her cervix is soft and closed on pelvic examination. The best next step in management is

(A) bed rest
(B) cerclage placement
(C) intramuscular progesterone
(D) repeat cervical length in 1 week
(E) vaginal progesterone

111

A 24-year-old African American woman, gravida 2, para 1, at 18 weeks of gestation with known sickle cell anemia comes to the hospital with a 1-day history of cough and fever. On physical examination, her respiratory rate is 20 breaths per minute and her temperature is 38.8°C (101.8°F). Her oxygen saturation by pulse oximetry is 94% on room air. Her pulmonary examination is normal. Her chest X-ray reveals an infiltrate in the left lower lobe. Fetal heart tones are 180 beats per minute. Her examination is otherwise normal. Her blood pressure, heart rate, and urine output are normal. The most likely diagnosis is

(A) sepsis
(B) pulmonary embolism
(C) acute chest syndrome
(D) pulmonary hypertension

112

A 37-year-old woman, gravida 5, para 4, at 39 weeks of gestation comes to the labor and delivery department in early labor. Her examination is consistent with a 3.2-kg estimated fetal weight. She received no prenatal care and has had no medical care since the delivery of her last child 6 years ago. She gave birth to all of her children vaginally and reports no pregnancy complications. With respect to screening for maternal human immunodeficiency virus (HIV) infection, the best management option is to offer

(A) maternal testing after delivery
(B) rapid enzyme-linked immunosorbent assay (ELISA) HIV testing in labor
(C) rapid immediate ELISA testing of the neonate
(D) immediate maternal Western blot testing

113

A 25-year-old white woman, gravida 1, comes to your office for a new obstetrics visit. Review of her medical record reveals a history of a spontaneous deep venous thrombosis (DVT) this past year after an ankle fracture and immobilization. She received 6 months of anticoagulation but no further evaluation. The inherited thrombophilia that is most frequently identified in patients with DVT is

(A) protein C deficiency
(B) factor V Leiden mutation
(C) prothrombin *G20210A* gene mutation
(D) protein S deficiency
(E) antithrombin III deficiency

114

A patient at 39 weeks of gestation comes to the hospital with mild preeclampsia for possible labor induction. She has had two prior low transverse cesarean deliveries although the last one required a T-shaped incision. Ultrasonography 1 week ago showed the fetal weight to be 4,300 g. Her Bishop score is 5. The major contraindication to trial of labor after cesarean delivery (TOLAC) for this patient is

(A) labor induction
(B) prior T-shaped incision cesarean delivery
(C) suspected macrosomia
(D) two prior low transverse cesarean deliveries

115

A 38-year-old college professor has a 6-week-twin gestation after embryo transfer. Her medical history includes asthma and depression. On routine prenatal screening, she discloses ongoing physical abuse by her husband. The factor most strongly associated with intimate partner violence is the woman's

(A) asthma
(B) infertility
(C) depression
(D) socioeconomic status

116

A 24-year-old woman, gravida 1, para 0, comes to your office for her first prenatal visit. In your review of her past and current medical histories, the condition that would lead you to screen her for hypothyroidism is

(A) obesity
(B) hypertension
(C) type 1 diabetes mellitus
(D) systemic lupus erythematosus

117

A nulliparous patient at 22 weeks of gestation undergoes transabdominal ultrasonography that indicates a cervical length of 2.0 cm. No dynamic changes are observed and the fetal size is consistent with dates. The best next step in management is

(A) fetal fibronectin
(B) uterine tocodynamometry
(C) digital cervical examination
(D) review of preterm labor symptoms
(E) transvaginal ultrasonography

118

A 30-year-old woman, gravida 3, para 2, comes to your office for a routine prenatal visit at 37 weeks of gestation. Gestational dating was determined by 10-week ultrasonography. She has had an uncomplicated pregnancy, but is concerned about the timing of her delivery. She would like to discuss the option of induction of labor. Her last child was born at term within 1 hour of her feeling contractions. She lives more than 60 km (37 mi) away from the hospital. Today, she has no contractions and reports normal fetal movements. On examination, her cervix is 2 cm dilated, 60% effaced, midposition, and of soft consistency, with the fetal station being –2. The most appropriate approach to management of this pregnancy would be

(A) induction of labor today
(B) induction of labor at 39 weeks of gestation
(C) amniocentesis for fetal lung maturity
(D) membrane stripping

119

A 32-year-old woman, gravida 2, para 1, comes to your office for her second prenatal visit at 14 weeks of gestation. Her only prior pregnancy resulted in a spontaneous preterm birth at 28 weeks of gestation. She reports no vaginal bleeding, malodorous vaginal discharge, dysuria, or cramping. Examination reveals a long, firm, and closed cervix. The uterus is consistent with 14 weeks of gestation and the fetal heart rate is 140 beats per minute. You counsel her that the most effective approach to diminish her risk of recurrent preterm delivery is

(A) abstinence from sexual intercourse
(B) administration of 17-α-hydroxyprogesterone caproate
(C) bed rest
(D) cervical cerclage placement based on history alone

120

A 39-year-old woman, gravida 2, para 0, at 36 weeks of gestation has type 1 diabetes mellitus and chronic hypertension. She is undergoing antepartum fetal assessment with biophysical profile (BPP) testing. After 75 minutes, she has a BPP of 2/10 and an amniotic fluid index of 2 cm. The best next step in management is to

(A) repeat BPP in 24 hours
(B) perform contraction stress test
(C) perform vibroacoustic stimulation
(D) proceed to delivery

121

A 25-year-old nulligravid woman comes to your office for a preconception care visit. She has been diagnosed with type 2 diabetes mellitus for the past 3 years. With diet, exercise, and weight loss, she was able to improve her glucose control and discontinue her oral hypoglycemic agent. She wishes to avoid going back on medication if she becomes pregnant. You counsel her that because of physiologic changes in her pregnancy, her glucose tolerance may worsen as the pregnancy advances. The placental protein most closely associated with postprandial elevations of maternal glucose in the third trimester is

(A) glucose transporter 1 protein
(B) human placental lactogen
(C) inhibin
(D) human chorionic gonadotropin
(E) activin

122

A 24-year-old woman, gravida 2, para 0, at 26 weeks of gestation comes to the hospital with her second episode of preterm labor. She received antenatal steroids and had a negative culture for group B streptococci (GBS) 5 days earlier. Monitoring reveals uterine contractions every 3 minutes with a Category I fetal heart rate tracing. Her cervix is 6 cm dilated and 100% effaced, and the fetal head is at 0 station. The best next step in management is to administer

(A) a rescue course of antenatal corticosteroids
(B) magnesium sulfate
(C) antibiotics for GBS prophylaxis
(D) indomethacin

123

A 21-year-old healthy woman, gravida 2, para 1, comes to the labor and delivery unit at 36 weeks of gestation with absent fetal heart tones, and is diagnosed with antepartum fetal death. Her obstetric history includes a prior low segment cesarean delivery because of nonreassuring fetal heart tones. Ultrasonography and clinical examination confirm estimated fetal weight of 2,900 g with complete breech presentation. On pelvic examination, her cervix is 1 cm dilated, 50% effaced, posterior position, and firm. Her laboratory results show normal platelet count and no evidence of disseminated intravascular coagulation. She wants delivery as soon as possible. The best delivery management for this patient is

(A) labor induction with misoprostol
(B) labor induction with prostaglandin E_2
(C) labor induction with transcervical Foley catheter
(D) cesarean delivery without labor

124

A 35-year-old woman, gravida 1, comes to your office for prenatal care at 10 weeks of gestation. She tells you that she has fatigue and an inability to climb steps without stopping. Chest examination reveals a soft diastolic murmur best heard at the apex. Echocardiography demonstrates mitral stenosis and normal sinus rhythm. Her atria are normal in size, and left and right ventricular contractility appears normal. Her family physician expresses concern about her cardiac ability to tolerate pregnancy. The physiologic change of pregnancy that will most negatively affect her cardiac function with mitral stenosis is

(A) increase in total blood volume
(B) third trimester plateau of cardiac output
(C) levorotation of the heart
(D) decrease in cardiac afterload

125

A 27-year-old white woman, gravida 1, comes to your office for her first prenatal visit. The patient and the father of the baby have no family members with cystic fibrosis. She desires screening for cystic fibrosis. Her cystic fibrosis screen result is negative for 32 mutations. You counsel her that the risk of cystic fibrosis to her fetus is

(A) increased
(B) decreased
(C) indeterminate
(D) zero

126

A 24-year-old woman, gravida 1, at 8 weeks of gestation is a registered nurse who has recently begun employment in a pediatrics unit. She expresses concern over her risk of contracting cytomegalovirus (CMV). The best strategy to prevent her from contracting CMV infection is

(A) ganciclovir prophylaxis
(B) universal precautions including good hand washing
(C) transfer to adult medicine unit
(D) hyperimmune globulin if she develops a mononucleosis-like illness

127

A 34-year-old woman at 6 weeks of gestation seeks treatment for her daily headaches. She has a history of severe asthma since childhood and migraine headaches since age 16 years. The headaches are severe, unilateral, last 8–10 hours, and interfere with her daily functioning. Before pregnancy, she had been taking daily ibuprofen but has switched to daily acetaminophen during pregnancy. The best pharmacotherapy for prevention of recurrent migraine headache for this patient is

(A) codeine
(B) ibuprofen
(C) nifedipine
(D) propranalol
(E) phenylephrine

128

A 37-year-old woman, para 1, at 35 weeks of gestation is found to have a breech presentation. She had a prior low transverse cesarean delivery 1 year ago for preeclampsia and failed induction of labor. Her past medical history is remarkable only for mild intermittent asthma. On ultrasonographic evaluation, the placenta is anterior. The amniotic fluid index is 10 cm. The fetus has an estimated weight of 2,600 g, and no anomalies are detected. The patient requests that you perform an external cephalic version today because of her work schedule. You tell her that you do not recommend the procedure because of her

(A) gestational age
(B) placental location
(C) amniotic fluid index
(D) prior cesarean delivery

129

A 38-year-old woman, gravida 1, comes to the labor and delivery unit at term with ruptured membranes and early labor. Six hours later, her contractions are regular, she is 7 cm dilated, and she requests intravenous narcotics for her discomfort. Her heart rate is 110 beats per minute and her temperature is 38.2°C (100.8°F). Her uterine fundus is noted to be tender between contractions. The fetal heart rate is 160 beats per minute at baseline but has moderate variability and no decelerations. The best next step in management is

(A) immediate cesarean delivery
(B) administration of acetaminophen and cool compresses
(C) administration of intravenous antibiotics
(D) culture the amniotic fluid using an intrauterine pressure catheter

130

A 33-year-old woman develops premature rupture of the fetal membranes at 25 weeks of gestation. She has no clinical signs of infection and is not in labor. She is treated with antenatal corticosteroids for fetal maturation and antibiotics to increase the duration of the latency period. The pharmacologic therapy that has been associated in this clinical scenario with a lower rate of cerebral palsy in surviving preterm neonates is

(A) terbutaline
(B) nifedipine
(C) indomethacin
(D) magnesium sulfate
(E) nitroglycerin

DIRECTIONS: Each of the questions below consists of lettered headings followed by a list of numbered words or statements. For each numbered word or statement, select the ONE lettered heading that is associated most closely with it and fill in the circle containing the corresponding letter on the answer sheet. Each lettered heading or lettered component may be selected once, more than once, or not at all.

131–134

For each clinical interpretation (131–134), select the most likely laboratory values (A–E). (Abbreviations: anti-HBc, total hepatitis B core antibody; anti-HBs, hepatitis B surface antibody; HBsAg, hepatitis B surface antigen; IgM anti-HBc: immunoglobulin M antibody to hepatitis B core antigen.)

(A) HBsAg negative, anti-HBc negative, anti-HBs positive
(B) HBsAg negative, anti-HBc positive, anti-HBs positive
(C) HBsAg negative, anti-HBc negative, anti-HBs negative
(D) HBsAg positive, anti-HBc positive, IgM anti-HBc positive, anti-HBs negative
(E) HBsAg positive, anti-HBc positive, IgM anti-HBc negative, anti-HBs negative

131. Acute infection with hepatitis B

132. Immune to hepatitis B due to natural infection

133. Chronic hepatitis B infection

134. Immune due to hepatitis B vaccination

135–138

For each test characteristic (135–138), select the corresponding first-trimester and second-trimester integrated aneuploidy screening protocol (A–D).

(A) Independent sequential
(B) Stepwise sequential
(C) Contingent sequential
(D) Complete integrated

135. Highest false-positive rate

136. Most cost-effective in an entire population

137. Patients not informed of results in the first trimester

138. Highest detection rate

139–143

A 26-year-old woman comes to your office for her first prenatal visit at 10 weeks of gestation, and you review her vaccination history with her. She reports that she does not have any risk factors for infections for which she could be vaccinated. The area in which she lives has not reported any increase of particular pathogens. For each vaccine (139–143), identify the appropriate timing for its administration (A–D) in this pregnant woman.

(A) Postpartum
(B) Any time during pregnancy
(C) First trimester only
(D) After 20 weeks of gestation

139. Influenza vaccine

140. Diphtheria and reduced tetanus toxoids and acellular pertussis vaccine (Tdap)

141. Varicella vaccine

142. Measles, mumps, rubella vaccine

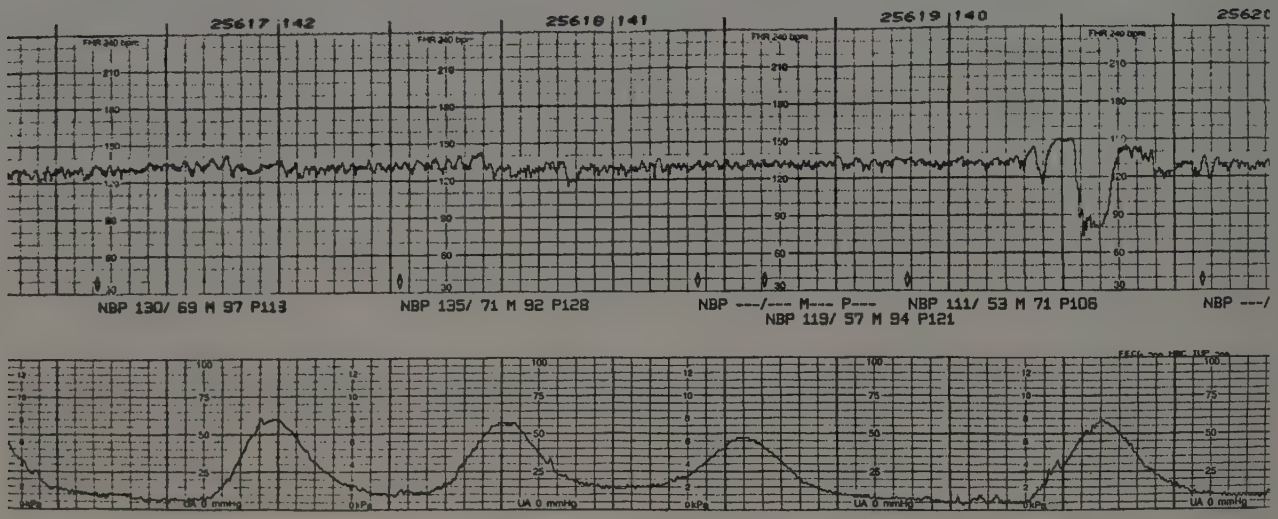
143. Hepatitis A vaccine

144–148

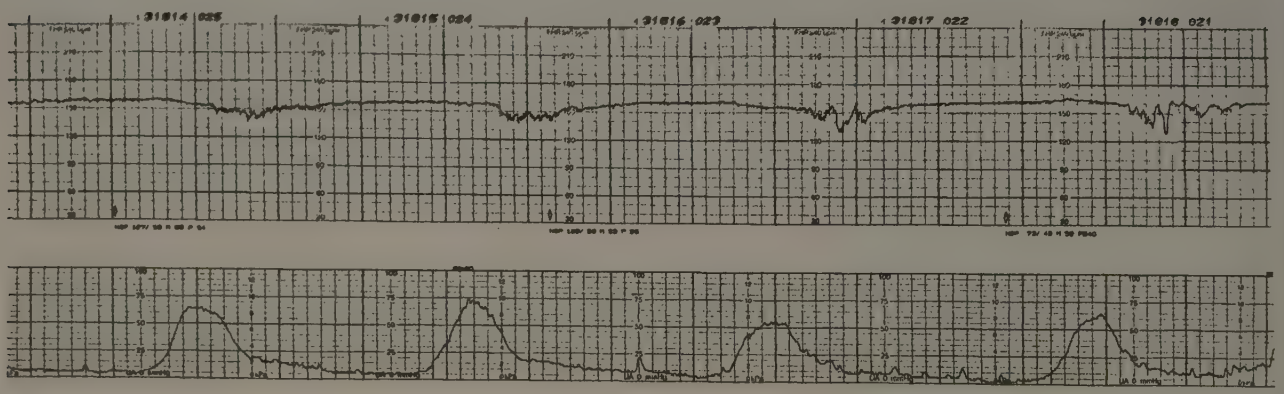
For each clinical scenario (144–148), choose the most likely fetal heart rate tracing pattern (A–D).

(A) Category I
(B) Category II
(C) Category III
(D) Uninterpretable

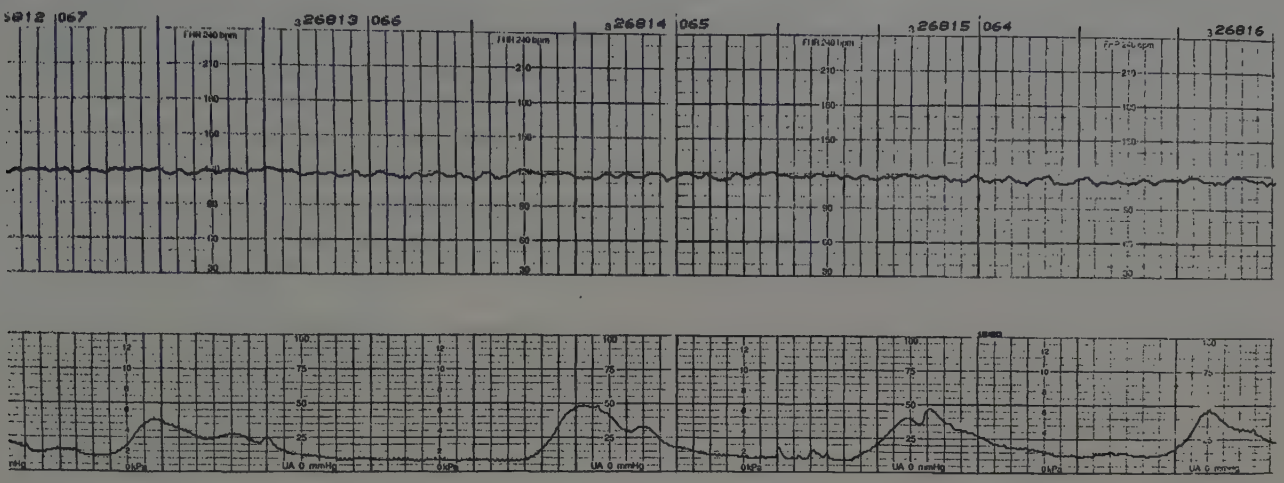
144. A 23-year-old woman at 38 weeks of gestation who receives oxytocin for augmentation of labor after admission for premature rupture of membranes.



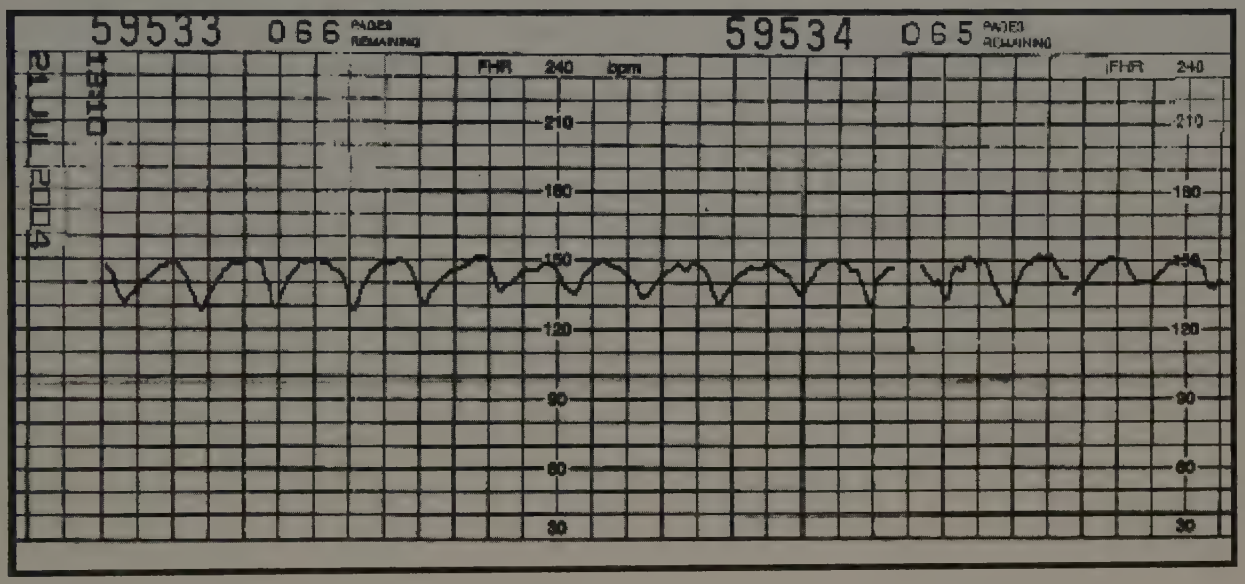
145. A 32-year-old woman, gravida 3, para 2, at 37 weeks of gestation is in labor; she has a history of chronic hypertension and pregnancy complicated by fetal growth restriction.



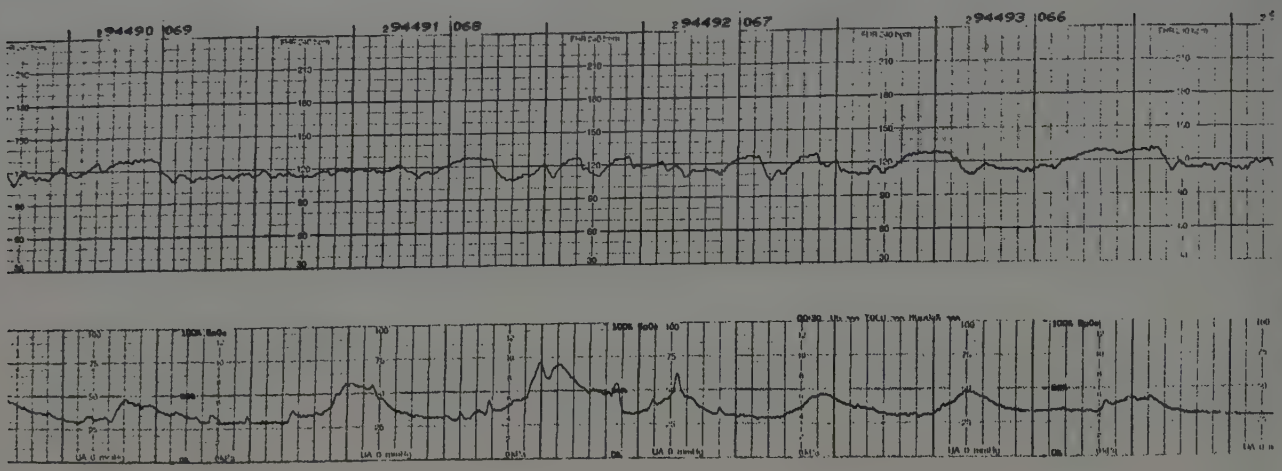
146. An 18-year-old woman, 5 cm dilated, 30 minutes after she received epidural anesthesia.



147. A 23-year-old woman at 38 weeks of gestation, who presents with contractions, rupture of membranes, and vaginal bleeding. Vaginal examination demonstrates a cervix that is 4 cm dilated and 100% effaced, with fetal vertex at 0 station.



148. A 28-year-old woman, gravida 3, para 0, at 40 weeks of gestation admitted in active labor.



149–151

For each clinical scenario (149–151), choose the drug (A–D) that is most likely associated with it.

(A) Terbutaline
(B) Nifedipine
(C) Magnesium sulfate
(D) Indomethacin

149. A 39-year-old woman at 31 weeks of gestation develops cardiac arrhythmias during prolonged treatment for recurrent preterm labor.

150. A 27-year-old woman at 26 weeks of gestation develops oligohydramnios after 5 days of tocolytic therapy.

151. A 16-year-old girl at 25 weeks of gestation develops flushing, headache, and lethargy 6 hours after the initiation of tocolytic therapy.

152–154

Select the umbilical artery blood gas interpretation (A–D) that goes best with the clinical scenario (152–154).

(A) Mixed acidemia (umbilical artery pH, 6.94; Pco_2, 94 mm Hg; Po_2, 12 mm Hg, base excess, –18 mEq/L).
(B) Metabolic acidemia (umbilical artery pH, 7.05; Pco_2, 40 mm Hg; Po_2, 30 mm Hg; base excess, –16 mEq/L).
(C) Normal (umbilical artery pH, 7.29; Pco_2, 46 mm Hg; Po_2, 40 mm Hg; base excess, –1 mEq/L).
(D) Respiratory acidemia (umbilical artery pH, 7.09; Pco_2, 65 mm Hg; Po_2, 20 mm Hg, base excess, –6 mEq/L).

152. A 35-year-old woman with a term pregnancy and Category I fetal heart rate (FHR) tracing undergoes amniotomy in labor and develops an umbilical cord prolapse followed by fetal bradycardia of 90 beats per minute. Emergent cesarean delivery occurs 14 minutes later. The baby is delivered with Apgar 7 at 1 minute and Apgar 8 at 5 minutes.

153. A 30-year-old woman with a term pregnancy progresses to complete dilation with station at +3. She is exhausted from pushing for 3 hours. The FHR is 150 beats per minute with moderate variability and an occasional variable deceleration that lasts 45 seconds and descends 45 beats below the baseline. Operative vaginal delivery is performed and the newborn is vigorous at birth.

154. A 24-year-old woman at 37 weeks of gestation comes to the hospital with vaginal bleeding, severe abdominal pain, a hypertonic uterus, and fetal bradycardia. She had a prior cesarean delivery. She is stabilized and is taken for emergent repeat cesarean delivery. The fetus is delivered 22 minutes later. The newborn develops seizures shortly after birth and meets the criteria for therapeutic hypothermia.

155–159

Match the hemoglobin electrophoresis results (A–E) with the most likely diagnosis of anemia (155–159).

(A) Hemoglobin A, 91%; A_2, 5%; and F, 4%.
(B) Hemoglobin A, 58%; A_2, 2%; S, 39%; and F, 1%.
(C) Hemoglobin A, 97%; A_2, 2%; and F, 1%.
(D) Hemoglobin A, 10%; A_2, 1%; S, 85%; and F, 4%.
(E) Hemoglobin A, 30%; A_2, 5%; S, 62%; and F, 3%.

155. α-thalassemia

156. β-thalassemia

157. Sickle cell disease

158. Sickle β-thalassemia

159. Sickle cell trait

160–163

For each pregnant patient (160–163) with a preexisting diagnosis of asthma, choose the most appropriate plan of management (A–E).

(A) Continue current regimen
(B) Take two puffs of albuterol every 20 minutes for two treatments and re-evaluate peak expiratory flow rate (PEFR) in 1 hour
(C) Add inhaled corticosteroid
(D) Come to office for evaluation
(E) Use home nebulizer every 30 minutes and re-evaluate PEFR in 4 hours

160. A 17-year-old primigravid girl is at 20 weeks of gestation with a medication regimen of inhaled albuterol as necessary and before exercise. Her best PEFR is 400 L/min. At present, her PEFR is 300 L/min, and she has been using her inhaler four times a day for the past week. The school nurse asks you to evaluate her because she requests to be excused from gym class.

161. A 26-year-old multiparous woman at 30 weeks of gestation is managed on salmeterol–fluticasone. Her personal best PEFR is 320 L/min, but her PEFR has been 220 L/min over the past 2 days. She has no other medical problems at the time of her prenatal visit.

162. A 35-year-old multiparous woman at 32 weeks of gestation is managed on salmeterol–fluticasone. Her personal best PEFR is 280 L/min. Since her most recent prenatal visit, her PEFR has been 250 L/min. She reports no other medical problems at this time.

163. A 38-year-old primigravid woman at 33 weeks of gestation is treated with salmeterol–fluticasone. Her personal best PEFR is 300 L/min. She feels somewhat short of breath and her PEFR is presently 175 L/min despite her taking reserve albuterol. She telephones you to ask what she should do next.

164–167

At a community hospital without neonatal intensive care unit capability, a 22-year-old woman, gravida 2, para 0, presents at 25 weeks of gestation with contractions. You find her cervix to be 3 cm dilated and 90% effaced. She is contracting every 5 minutes. You administer an initial dose of steroids and call for transport to a tertiary center. The accepting facility requests that she be given tocolysis before transport. In choosing the most appropriate tocolytic agent to use, you consider a number of factors, including contraindications. Match the contraindication (A–D) with the tocolytic agent (164–167).

(A) Oligohydramnios
(B) Hypotension
(C) Hypokalemia
(D) Myasthenia gravis

164. Magnesium sulfate

165. Nifedipine

166. Terbutaline

167. Indomethacin

168–171

Match the case presentation (168–171) with the most likely diagnosis (A–F).

(A) Acute fatty liver of pregnancy
(B) Acute viral hepatitis
(C) Cholestasis of pregnancy
(D) Hemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome
(E) Hemolytic uremic syndrome
(F) Thrombotic thrombocytopenic purpura

168. A 28-year-old primigravid woman with a twin gestation presents at 34 weeks of gestation with a 4-day history of anorexia, malaise, nausea, right upper quadrant pain, and headache. She is ill-appearing with a temperature of 37.4°C (99.4°F), blood pressure (BP) of 138/84 mm Hg, and icteric sclerae. Laboratory results show elevated white blood cell count and transaminase levels, 1+ proteinuria, platelet count of 164,000/mm^3, creatinine of 0.9 mg/dL, glucose of 52 mg/dL, fibrinogen of 108 mg/dL, and a prothrombin time of 32 seconds.

169. A 39-year-old woman, gravida 4, para 2, presents at 32 weeks of gestation with a 1-day history of epigastric pain, nausea, vomiting, and headache. She is afebrile and in moderate distress with a BP of 168/108 mm Hg. Laboratory results show 3+ proteinuria, lactate dehydrogenase of 720 international units/L, platelet count of 76,000/mm^3, creatinine of 1.0 mg/dL, aspartate aminotransferase of 132 international units/L, alanine aminotransferase of 141 international units/L, glucose of 84 mg/dL, and fibrinogen of 260 mg/dL.

170. A 31-year-old woman, gravida 2, para 1, presents at 27 weeks of gestation with headache, visual disturbance, abdominal pain, nausea, and vomiting. She has a temperature of 38.3°C (100.9°F) and BP of 146/91 mm Hg. Laboratory results include 2+ proteinuria, platelet count of 21,000/mm^3, lactate dehydrogenase of 1,552 international units/L, creatinine of 1.7 mg/dL, normal transaminase levels, and a normal coagulation panel.

171. A 23-year-old primigravid woman at 35 weeks of gestation presents with acute onset of malaise, anorexia, nausea, and right upper quadrant pain. She is afebrile with a BP of 124/68 mm Hg and her skin and sclerae are icteric. Laboratory results show negative urine protein, transaminase levels five times normal, total bilirubin of 3.4 mg/dL, creatinine of 0.6 mg/dL, platelet count of 194,000/mm^3, lactate dehydrogenase of 350 international units/L, and prothrombin time of 16 seconds.

PROLOG USER DEMOGRAPHICS AND PROLOG EVALUATION

To obtain a profile of the group of Fellows choosing to use self-assessment as a continuing medical education tool, the Education Division would appreciate the following information. This is for education program planning only and will not be associated with score reports in any way.

Part I. Demographics

172. Which of the following best describes the focus of your practice?

(A) General Obstetrics and Gynecology
(B) Oncology
(C) Maternal–Fetal Medicine
(D) Endocrinology
(E) Urogynecology
(F) Other

173. Are you board certified in obstetrics and gynecology?

(A) Yes
(B) No

174. Do you have subspecialty certification?

(A) Yes
(B) No

175. Have you been recertified?

(A) Yes
(B) No

176. How many years have you been in practice?

(A) 10 years or less
(B) 11–20 years
(C) More than 20 years

Part II. PROLOG Evaluation

For each of the reasons listed (177–180), indicate the degree of importance to you for selecting PROLOG as a means of professional development, using the scale below:

4 = Very important
3 = Somewhat important
2 = Not very important
1 = Not important at all

177. Update my knowledge

178. Verify my current practice

179. Earn continuing medical education credits

180. Use as a home study program

For questions 181–185, indicate whether you are using this unit of PROLOG to prepare for the following:

181. The in-training examination of the Council on Residency Education in Obstetrics and Gynecology (CREOG)

182. The written board examination of the American Board of Obstetrics and Gynecology (ABOG)

183. The oral board examination of ABOG

184. The 6-year recertification examination of ABOG

185. In your estimation, what percentage of the content in PROLOG is new information to you?

(A) Less than 10%
(B) 10–20%
(C) 21–50%
(D) 51–75%
(E) More than 75%

For each of the statements below (186–190), indicate the degree to which you agree, using the following scale:

4 = Strongly agree
3 = Somewhat agree
2 = Somewhat disagree
1 = Strongly disagree

186. The items in PROLOG closely relate to my clinical practice.

187. PROLOG is helpful in assessing my knowledge.

188. I have made one or more changes in patient management after reading PROLOG.

189. The critiques are useful.

190. The references accompanying each answer are useful.

Indicate how you would rate the following (191–200) in preference for obtaining professional development, using the following scale:

4 = Highest preference
3 = Somewhat high
2 = Somewhat low
1 = Lowest preference

191. Postgraduate courses

192. ACOG district annual meeting

193. ACOG Annual Clinical Meeting

194. PROLOG self-assessment

195. PROLOG Dialogue audio programs

196. Videotape programs

197. CME programs offered by hospital departments

198. CME programs offered by other organizations

199. CD ROM

200. Internet

201. Was experimental or unlabeled use of products clearly reflected in the critiques?

Yes
No

202. Was there evidence of "conflict of interest" disclosures by task force members?

Yes
No

Appendix A

Normal Values for Laboratory Tests*

Analyte	Conventional Units
Alanine aminotransferase, serum	8–35 units/L
Alkaline phosphatase, serum	15–120 units/L
Menopause	
Amniotic fluid index	3–30 mL
Amylase	20–300 units/L
Greater than 60 years old	21–160 units/L
Aspartate aminotransferase, serum	15–30 units/L
Bicarbonate	
Arterial blood	21–27 mEq/L
Venous plasma	23–29 mEq/L
Bilirubin	
Total	0.3–1 mg/dL
Conjugated (direct)	0.1–0.4 mg/dL
Newborn, total	1–10 mg/dL
Blood gases (arterial) and pulmonary function	
Base deficit	Less than 3 mEq/L
Base excess, arterial blood, calculated	–2 mEq/L to +3 mEq/L
Forced expiratory volume (FEV_1)	3.5–5 L
	Greater than 80% of predicted value
Forced vital capacity	3.5–5 L
Oxygen saturation (So_2)	95% or higher
Pao_2	80 mm Hg or more
Pco_2	35–45 mm Hg
Po_2	80–95 mm Hg
Peak expiratory flow rate	Approximately 450 L/min
pH	7.35–7.45
Pvo_2	30–40 mm Hg
Blood urea nitrogen	
Adult	7–18 mg/dL
Greater than 60 years old	8–20 mg/dL
CA 125	Less than 34 units/mL
Calcium	
Ionized	4.6–5.3 mg/dL
Serum	8.6–10 mg/dL
Chloride	98–106 mEq/L
Cholesterol	
Total	
Desirable	140–199 mg/dL
Borderline high	200–239 mg/dL
High	240 mg/dL or more
High-density lipoprotein	40–85 mg/dL
Low-density lipoprotein	
Desirable	Less than 130 mg/dL
Borderline high	140–159 mg/dL
High	Greater than 160 mg/dL
Total cholesterol-to-high-density lipoprotein ratio	
Desirable	Less than 3
Borderline high	3–5
High	Greater than 5
Triglycerides	
20 years and older	Less than 150 mg/dL
Less than 20 years old	35–135 mg/dL

*Values listed are specific for adults or women, if relevant, unless otherwise differentiated.

(continued)

Normal Values for Laboratory Tests* (*continued*)

Analyte	Conventional Units
Cortisol, plasma	
8 AM	5–23 micrograms/dL
4 PM	3–15 micrograms/dL
10 PM	Less than 50% of 8 AM value
Creatinine, serum	0.6–1.2 mg/dL
Dehydroepiandrosterone sulfate	60–340 micrograms/dL
Erythrocyte	
Count	3,800,000–5,100,000/mm^3
Distribution width	10 plus or minus 1.5%
Sedimentation rate	
Wintrobe method	0–15 mm/hour
Westergren method	0–20 mm/hour
Estradiol-17β	
Follicular phase	30–100 pg/mL
Ovulatory phase	200–400 pg/mL
Luteal phase	50–140 pg/mL
Child	0.8–56 pg/mL
Ferritin, serum	18–160 micrograms/L
Fibrinogen	150–400 mg/dL
Follicle-stimulating hormone	
Premenopause	2.8–17.2 mIU/mL
Midcycle peak	15–35 mIU/mL
Postmenopause	24–170 mIU/mL
Child	0.1–7 mIU/mL
Glucose	
Fasting	70–105 mg/dL
2-hour postprandial	Less than 120 mg/dL
Random blood	65–110 mg/dL
Hematocrit	36–48%
Hemoglobin	12–16 g/dL
Fetal	Less than 1% of total
Hemoglobin A_{1c} (nondiabetic)	5.5–8.5%
Human chorionic gonadotropin	0–5 mIU/mL
Pregnant	Greater than 5 mIU/mL
17α-Hydroxyprogesterone	
Adult	50–300 ng/dL
Child	32–63 ng/dL
25-Hydroxyvitamin D	10–55 ng/mL
International Normalized Ratio	Greater than 1
Prothrombin time	10–13 seconds
Iron, serum	65–165 micrograms/dL
Binding capacity total	240–450 micrograms/dL
Lactate dehydrogenase, serum	313–618 units/L
Leukocytes	
Total	5,000–10,000/cubic micrometers
Differential counts	
Basophils	0–1%
Eosinophils	1–3%
Lymphocytes	25–33%
Monocytes	3–7%
Myelocytes	0%
Band neutrophils	3–5%
Segmented neutrophils	54–62%

*Values listed are specific for adults or women, if relevant, unless otherwise differentiated.

(*continued*)

Normal Values for Laboratory Tests* (*continued*)

Analyte	Conventional Units
Lipase	
60 years or younger	10–140 units/L
Older than 60 years	18–180 units/L
Luteinizing hormone	
Follicular phase	3.6–29.4 mIU/mL
Midcycle peak	58–204 mIU/mL
Postmenopause	35–129 mIU/mL
Child	0.5–10.3 mIU/mL
Magnesium	
Adult	1.6–2.6 mg/dL
Child	1.7–2.1 mg/dL
Newborn	1.5–2.2 mg/dL
Mean corpuscular	
mCH Hemoglobin	27–33 pg
mCHC Hemoglobin concentration	33–37 g/dL
mCV Volume	80–100 cubic micrometers
Partial thromboplastin time, activated	21–35 seconds
Phosphate, inorganic phosphorus	2.5–4.5 mg/dL
Platelet count	140,000–400,000/mm^3
Potassium	3.5–5.3 mEq/L
Progesterone	
Follicular phase	Less than 3 ng/mL
Luteal phase	2.5–28 ng/mL
On oral contraceptives	0.1–0.3 ng/mL
Secretory phase	5–30 ng/mL
Older than 60 years	0–0.2 ng/mL
1st trimester	9–47 ng/mL
2nd trimester	16.8–146 ng/mL
3rd trimester	55–255 ng/mL
Prolactin	0–17 ng/mL
Pregnant	34–386 ng/mL by 3rd trimester
Prothrombin time	10–13 seconds
Reticulocyte count	Absolute: 25,000–85,000 cubic micrometers 0.5–2.5% of erythrocytes
Semen analysis, spermatozoa	
Antisperm antibody	% of sperm binding by immunobead technique; Greater than 20% = decreased fertility
Count	Greater than or equal to 20 million/mL
Motility	Greater than or equal to 50%
Morphology	Greater than or equal to 15% normal forms
Sodium	135–145 mEq/L
Testosterone, female	
Total	6–86 ng/dL
Pregnant	3–4 × normal
Postmenopause	½ of normal
Free	
20–29 years old	0.9–3.2 pg/mL
30–39 years old	0.8–3 pg/mL
40–49 years old	0.6–2.5 pg/mL
50–59 years old	0.3–2.7 pg/mL
Older than 60 years	0.2–2.2 pg/mL
Thyroid-stimulating hormone	0.2–3 microunits/mL
Thyroxine	
Serum free	0.9–2.3 ng/dL
Total	1.5–4.5 micrograms/dL

*Values listed are specific for adults or women, if relevant, unless otherwise differentiated.

(continued)

Normal Values for Laboratory Tests* (*continued*)

Analyte	Conventional Units
Triiodothyronine uptake	25–35%
Urea nitrogen, blood	
Adult	7–18 mg/dL
Older than 60 years	8–20 mg/dL
Uric acid, serum	2.6–6 mg/dL
Urinalysis	
Epithelial cells	0–3/HPF
Erythrocytes	0–3/HPF
Leukocytes	0–4/HPF
Protein (albumin)	
Qualitative	None detected
Quantitative	10–100 mg/24 hours
Pregnancy	Less than 300 mg/24 hours
Urine specific gravity	
Normal hydration and volume	1.005–1.03
Concentrated	1.025–1.03
Diluted	1.001–1.01

*Values listed are specific for adults or women, if relevant, unless otherwise differentiated.

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